Date: 2/28/18

Comments for VW BMP EMT Settlement

1. Does not establish a clear method or system of allocation of monies under the VW EMT pool of money to the individual Priority Areas.

2. Heavily ways on NOx and has missing data points for Priority Area #3

3. Silent on State to Federal legal obligations and existing mitigation plans under NAAQS and SIP Ozone, PM2.5

   Illinois Infrastructure State Implementation Plan for 2012 (2017/2018) Annual Fine Particle Matter (PM2.5) National Ambient Air Quality Standard.” (NAAQS) The Infrastructure State Implementation Plan ("SIP") also addresses Section 110(a)(2)(D) of the Federal Clean Air Act ("CAA"), also known as the “Good Neighbor Provision.” The Illinois EPA is required to submit an infrastructure SIP to the United States Environmental Protection Agency ("USEPA") under CAA sections 110(a)(1) and (a)(2) concerning the capabilities of the State to implement, maintain, and enforce each primary or secondary NAAQS.

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   Many articles have petro ICE equivalent emissions to diesel motors for NOx - but PM2.5 is more unique with diesel ICE.

4. Total Air quality as it relates to known health issues should have a weight in the funding percentages by priority regions/areas.

   a. PM2.5 now linked in medical journal with Autism – May 21, 2015 - University of Pittsburgh Schools of the Health Sciences - [link]

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Per draft - “These on-road projects include replacements or repowers with new diesel, alternate fuel, or electric vehicles and engines.”

a. “repowers with new diesel” - implies to put a better or newer diesel motor into an existing mobile transportation unit. This would be a major error under the intent of this settlement. Should be stricken and it could be “repowered” with CNG, LPG, or other AFV, or electricity (BEV).

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c. This needs some wordsmithing big time.

d. How are you going to sell “Clean Diesel” in this settlement?

8. Focus number 2 is missing in EMA areas “Off-Road Projects” and “All-electric school bus projects” – focus 1 is locomotives and 1,700 tons of NOx

a. “On-Road Projects” has EVSE as focus 2

b. “All-electric school bus projects” – needs clarification as enumerated in 6 above.

9. Total NOx is missing for EMA - “All-electric school bus projects”

10. “Illinois Green Fleets Grant Program” is mentioned but not referenced any further.

11. EMA groups have no discussion or method on the arrival of percent allocations.

a. 20% - “On-Road Projects”

b. 10% - “All-electric school bus projects”

c. 65% - “Off-Road Projects”

12. Figure 5 does not map the Chicago NAA to vehicle to EJP completely - missing bottom and legend cuts it off.

13. Priority Region/area 3 – (7) seven counties - 3 collar Counties in yellow in North East IL region should be consolidated less Cook Co’s sub-allocation.

14. Rest of the State not in Priority areas 1, 2, and 3 are silent.
Volkswagen Emissions Settlement

Under the Volkswagen Clean Air Act Civil Settlement, which allocates funds to states for improving air quality, Illinois stands to receive $108 million. The state has nominated the Illinois Environmental Protection Agency (IEPA) to delegate and redistribute these funds to increase air mitigation initiatives. However, Illinois has taken no action to acquire public participation to determine how these funds will be distributed, despite the fact that many other states have already accepted public input. Here's what you can do:

Support SB3101 - Placed on Calendar Order of 2nd Reading April 17, 2018

SB3101 (2/15/18), which is sponsored by State Senator Cristina Castro (D-Elgin), will require the IEPA to establish a task force by which stakeholders can provide input in the way these funds are used. The task force will also create a transparent process with 6 public hearings and opportunity for concerned parties to participate and a redrafted proposed plan by the IEPA.

Support SB3055 – not going as well.

State Senator Heather A. Steans (D-Chicago District 7) is sponsoring SB3055 (Feb 15, 2018), which will direct the maximum allowable amount the settlement towards light-duty electric vehicle infrastructure. These funds can support charging stations, electric buses for public schools, and electric fleets for municipalities. Using the funds for electrification of the transportation sector will protect and improve quality of life. Basically Prohibits or kills the largest line item of the current draft of “off-road vehicles” - “locomotives” at 65% of 108M - Reallocates $70,641,790 to all electric EVSE and EV fleets.

She now has 3 additional sponsors on her bill.

IL HR906

Sponsored By Rep. Linda Chapa LaVie and Rep. La Shawn K. Ford proposes the IEPA withdraw its draft BMP and extend the public comment period until June 30, 2018. HR906 also recommends the formation of an Illinois Volkswagen Environmental Beneficiary Mitigation Plan Task Force to assist the IEPA.

Visit the Illinois Environmental Council (IEC) website, enter your contact information, and a letter in support of these two bills will be sent to your representative: Take action to support electric vehicles
Simply use the money to pay overdue state bills. Do not and I repeat do not use for alternate fuel projects. Such projects are useless and the money would go to some friend of Rahm or Madigan. Just for once show some common sense with a windfall. I bet I never hear back.

Mike Sheridan
Citizen of this once great state.

Sent from my iPad
Hello,

While it is nice to see that a plan has been formulated, it is disappointing to see how the priorities have fallen. Illinois is not just Chicago or East St. Louis. In the City of Moline, we are ineligible for a lot of things because we are not in or near Chicago. We have been working toward reducing our carbon footprint without any kind of government mandate for many years and it would be nice to have some assistance with the added costs that are often accompanied with alternative fuel applications. We have been searching for funding assistance to install electric vehicle charging station infrastructure with no luck and have implemented compressed natural gas vehicles into our fleet to reduce particulate matter. We would like to be an even “greener” city than we already are, but we have hit budget shortfalls recently like many other municipalities/agencies/counties in the state. We hope that more areas are considered moving forward, as reinvesting in only the Chicago and the East St. Louis areas will only help to promote growth and green initiatives in those locations and not state-wide.
Good Day,

This VW settlement money for the state is fantastic! I am actually an owner of a TDI and have had it already retrofitted to be currently compliant. I like the initial layout of available funds expect for one thing. The best way to reduce emissions is to not create emissions in the first place. Therefore, one can walk, paddle a boat, or ride a bike. Since walking and biking (and skateboarding, rollerblading) may be done on the same smooth surface, I would dream to use some of the funds to extend bike trails. I know for myself, I would be more inclined to give the Grand Illinois Trail a shot if I knew I was on designated bike trails the whole way instead of on road. Maybe there can be more trail connections in Chicago area?

For a stray idea, on the Fox River up north between Algonquin and Fox Lake what if there was a boat taxi service that had some boats that aren’t powered by gasoline? That would mean there would have to be the electric powering stations you mention. The boats would advertise how nice a non-gasoline boat could be in hope to encourage future boat owners to follow.

Have a Good Day,

Travis Solberg
Chief Sustainability Steward
LEED AP

www.solbergmfg.com
A Certified B Corporation
Better Buildings Challenge Partner
As you develop the final VW beneficiary mitigation plan for Illinois, please consider the following comments from Orange EV:

In order to help fleets achieve cost parity with diesel purchases and therefore increase deployments of 100% electric heavy duty vehicles, please offer the maximum allowable funding for Class 8 electric projects: Up to 75% for private fleets and more for public.

Please also ensure that terminal trucks (aka yard trucks, hostlers, spotters, cargo handling equipment, etc.) are eligible in the Illinois funding categories for both "On-Road Projects" and "Off-Road Projects", wherever the trucks are used today. Note that:

- Terminal trucks are typically operated in non-attainment areas and/or areas that receive a disproportionate quantity of air pollution from diesel fleets.
- Terminal truck projects are transformative in that they are a “gateway” vehicle. In 2015, Orange EV was the first to commercially deploy Class 8 pure-electric trucks, and to our knowledge is currently the only firm deploying such trucks to paying customers. Each Orange EV deployment proves electric viability, overcomes pre-conceived notions, and speeds the adoption of clean technologies.
- The EPA defines “Drayage” as “The transport of goods over a short distance.” Terminal trucks transport goods at cargo handling facilities.
- The Consent Decree does not define “port” which regulators agree gives them leeway to define port in broad terms. For example, one state recently published the following in a public information presentation: *Neither the Consent Decree nor the Trust Agreements define “port.” A presentation by the Mobile Sources Technical Review Subcommittee of EPA’s Clean Air Act Advisory Committee suggests that a port may be defined as a node in the larger goods movement supply chain, to include cruise terminals, bulk terminals, container terminals, and intermodal container transfer facilities.*

The Illinois draft plan states that off-road or non-road projects "...often result in the greatest amount of emission reductions and can be the most cost-effective projects." It is important to note that emissions reductions for terminal trucks may be far higher than calculated using the Diesel Emissions Quantifier or other standard calculation tools. Multiple studies have found that performance of a diesel’s selective catalytic reduction (SCR) system is highly dependent on the duty cycle. In duty cycles with significant idling, low speeds, or low loads, diesel engine temperatures do not reach levels that support sustained SCR performance. This results in very high NOx emissions, up to 10x higher than the 2010 EPA NOx emission standard. Given that diesel terminal trucks typically operate 10-15 mph, they may emit far more NOx than currently estimated, along with other criteria pollutants. Replacing diesels with 100% electric permanently eliminates terminal truck emissions.

Please contact us with questions or if we can be of assistance. Thank you for your consideration and partnership in the mission to deploy emission-free technologies.

Respectfully,

Julie Brooks
Orange EV, Pure Electric Terminal Trucks
"Spend 90% Less in Fuel to Haul the Same Load with No Diesel and No Emissions"
Address: [Redacted]  Office: [Redacted]  eMail: [Redacted]
Website: www.OrangeEV.com
Three basic comments:

1) The BMP has assigned monetary value for All-Electric School Bus Project (up to approx. $10,867,968). Another bus project which should be separated out and assigned their own monetary value would be: All-Electric TRANSIT Bus Project. Or are transit buses included in the All-Electric School Bus Project? If so, the designation should reflect that.

2) THE BMP should assign $’s or % to each Priority 1, 2 and 3. If not, all funds will probably be used up in Priority 1 or 2 and there would be nothing left for Priority 3 projects.

3) I would suggest adding a page with definitions for all the acronyms that are spread throughout the document.

We appreciate the opportunity for input in this process. Any questions, please feel free to contact us at your convenience.

Thanks,

Paula

Paula S. Hughes
Grant Specialist

Rockford Mass Transit District
Beneficiary Mitigation Plan for Volkswagen Settlement – Medidock Ambulance Idling Reduction System

Comments: March 1, 2018

Use of Volkswagen settlement funds for Medidocks to advance Ambulance/Emergency Vehicle Idle Reduction:

Idling of ambulances is a significant contributor to air pollution, particularly as the majority of the idling occurs adjacent to healthcare facilities with their sensitive populations exposed. Reducing this idling provides a direct air quality improvement. Problematic to not idling the ambulance is the fact that interior temperatures and medical equipment must be maintained in a state of readiness, requiring power. My firm’s product, the Medidock, provides a real solution to this problem by allowing an ambulance to remain ‘mission-ready’ without idling.

Our system is a kiosk, installed at Emergency Departments and other medical facilities and at remote locations where ambulances are ‘posted’ to improve response times and improve air quality. The Medidock requires no special equipment to be installed onboard the vehicle – any & all ambulances can use it. In addition to electrical power for the onboard emergency medical equipment it also provides vehicle interior climate control - without the need to run the engine. Our units ease of operation encourages EMT’s to actually use the machines, resulting in fuel and maintenance savings for the vehicle operators and environmental benefits for everyone. On our website www.medicaire.net, you will find a study done by the Ozone Transport Commission (OTC) which indicates a significant NOx reduction as noted from sites in VT & NH.

Medidocks are presently successfully operating in northern New England and locations in the Midwest. While vehicle idle reduction is not specifically indicated in the settlement, augmentation of DERA is, allowing a pathway for funding this important public health/air quality improvement.

I urge you to consider earmarking funding for the Medidock in the final Beneficiary Mitigation Plan. Thank you for your consideration.

Frank Podgwaite
Medicaire, LLC
Medidock
State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
IEPA VW Settlement,

Dear IEPA,

Thank you for the opportunity to provide public comment concerning the VW settlement funds allocated to Illinois.

Electrifying transportation is a huge win for our economy, as we make a lot of electricity and we don't pump any oil here.

Please maximize the funds into electrifying transportation. This is a good way to increase our wealth.

Thanks,
Dan

[Redacted]
IEPA VW Settlement,

Dear IEPA,

Thank you for the opportunity to provide public comment concerning the funds from the Volkswagen Clean Air Act Civil Settlement.

I ask that the IEPA take the time to receive feedback from everyone involved in the process, including through public hearings and additional time for comments. Other states have held longer and more open public comment periods than Illinois, which I find disgraceful for us.

I believe that the future energy infrastructure of Illinois will be based on 100% clean energy and it is our job to make that transition happen as soon as possible. By bringing these improvements to economically vulnerable and environmental justice communities, we can also drive development to the most disadvantaged parts of our state.

Designating funding for electric vehicle infrastructure should be a top priority. Kick-starting a broader transition to electric vehicles will ultimately result in greater emissions reductions, with additional benefits such as reductions in carbon emissions and other pollutants. I am pleased to see electric school buses receive funding, but I would like to see more support designated for electric light-vehicle infrastructure.

It is critical that the IEPA restrict use of these funding to prevent them being spent on deceptive "clean" diesel and fracking technologies. These uses will, over their lifespan, ultimately result in greater emissions than rapid transition to electrically powered vehicles.

Thank you very much.

Nathaniel Forsythe
From: Dan Johnson  
Sent: Friday, March 9, 2018 4:41 PM  
To: Frost, Brad  
Subject: [External] Re: VW Settlement Public Comment

Thanks for the instant response and for telling me about the surveymonkey.

If it were up to me I’d suggest going in on a big order with other states on electric trucks and buses for public entities to drive down costs as much as possible.

Would be nice to lower costs on the public sector over time from not buying diesel.

Thanks for your work.

Best  
Dan

Sent from my iPhone

On Mar 9, 2018, at 3:54 PM, Frost, Brad <stevensbg@illinois.gov> wrote:

Thank you for your comments on Illinois’ draft VW Beneficiary Mitigation Plan (BMP). Illinois EPA encourages you to visit our website, http://www.epa.illinois.gov/topics/air-quality/vw-settlement/ for more information about the Settlement and the draft BMP. The website includes narrative, charts and graphs about the Settlement funds. We have also set up a VW Survey to receive focused comments on priorities established in the Settlement and draft BMP. Please take the Survey as it only takes a few minutes to complete. Your feedback will help the Illinois EPA establish priorities in the final BMP and scoring of projects.

If you have any questions, please feel free to contact me.
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Hi Brad – We operate a decent sized (56 power units) fleet and over the past handful of years we have been transitioning away from *leased*, diesel vehicles to *owned*, CNG trucks and tractors. We would like to see wording in the VW Settlement that allows us to access funds to cover the cost of purchasing new CNG vehicles although the diesel vehicles are returned to leasing company, not necessarily permanently out of service. That is beyond our control as a lessee.

If you think this is at all a possibility, please let me know what we need to do to submit formal comments.

Thanks,

*Claire Cameron*

Facility & Quality Assurance Manager

Testa Produce, Inc.

Green By Nature - Greener By Choice

Visit us on Facebook and Twitter

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Thank you and eat a lot of produce daily.

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Yates, Evan

From: Frost, Brad
Sent: Tuesday, March 13, 2018 11:56 AM
To: EPA.VWSettlement
Subject: FW: [External] Comments for VW BMP
Attachments: IL EPA VW EMT Comments to Draft BMP Rex Irby v1.docx; VW Cheat IL Summary v1.xlsx

From: Rex Irby
Sent: Wednesday, February 28, 2018 1:05 PM
To: Frost, Brad
Subject: [External] Comments for VW BMP

Thanks Brad - worked on these this morning after first read through.

Attached word doc with the comments
Attached excel of how the money would allocate per the written BMP?

Let me know if I can be of further help.

Sincerely - Rex

--
Rex Irby - The New Solar and Computer Guy

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Percent of VW Cheat Fleet
Counties
EMT Funds Gross (Not ZEV) 1005 by fleet
NOx percentages - (Primary) Mobile sourced
NOx percentages - (Primary) "Point" sourced
Combo PM25 % Heavily Mobile Diesel influenced
Weighted Combo AQI PM2.5 to state average
Environmental Justice Population (EJP)
By Priority Area Adjuster % for AQI/population
Final Weighted Average Allocation point system

EMA Group
On Road Projects
All-electric school bus projects
Off-Road Projects
Administrative Expenses IL EPA
Total Percent of project breakdown

Source Designation
Mobile
Mobile
Mobile
Admin

Cook County PA#1 Breakout
Pro Rata of region

On Road Projects
All-electric school bus projects
Off-Road Projects
Administrative Expenses IL EPA
Total Percent of project breakdown

EJP percent of State whole
EJP percent of PA#1

Illinois Green Fleets Grant Program ???
CAIR and SIP NOx programs
http://www.epa.illinois.gov/
state implementation plans Ozone, PM2.5

Figure 5 does not map the NAA to vehicle to EJP completely - missing bottom and legend cuts it off
Figure 6 does map the NAA to vehicle to EJP completely

Seven Couties 3 colar CO's NE IL region should be consolidated less Cook
<table>
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ov/topics/air-quality/planning-reporting/nox/index
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<td>Silent but can be implied</td>
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<td>literature reads Stationary - clarification needed</td>
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<tr>
<td>Missing</td>
<td>50%</td>
<td>1,700</td>
</tr>
</tbody>
</table>
From: Susan Mudd
Sent: Thursday, March 01, 2018 2:03 PM
To: Messina, Alec; Al Grosboll; EXT Dzubay, Tamara
Cc: Frost, Brad; Jennifer Walling
Subject: [External] IEPA VW plan and quantifying emissions from new diesel

Director Messina,

We appreciate your commitment to electric school buses as an important component of Illinois’ Volkswagen Beneficiary Mitigation Plan allocations and Illinois children’s’ future.

In the call Friday afternoon regarding IL EPA’s draft VW Beneficiary Mitigation Plan there was discussion as to how IEPA will calculate diesel emissions. You stated that IEPA is aware of the underestimation of diesel emissions by US EPA’s Diesel Emissions Quantifier (DEQ) and was not yet certain how the department will handle this. As you are aware, Argonne National Laboratory has created a multiplier to more accurately reflect true new diesel emissions in their AFLEET tool (https://greet.es.anl.gov/afleet_tool). The AFLEET tool also includes a total cost of ownership calculator and quantifies the impact of health externalities and idling. You asked that I both supply that information in comments on the plan and provide you with contact information for Andrew Burnham at Argonne National Laboratory who is part of the team that updated AFLEET. His contact information follows:

Andrew Burnham
Argonne National Laboratory

With best wishes,
Susan

Susan Mudd
Senior Policy Advocate
Environmental Law & Policy Center

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On behalf of the Diesel Technology Forum, I would like to submit this comment concerning the draft Beneficiary Mitigation Plan. Please contact me with any questions or concerns.

Thank you,

Ezra Finkin
Director, Policy and External Relations
Diesel Technology Forum

Connect with the Diesel Technology Forum
For the latest insights and information from the leaders in clean diesel technology, join us on Facebook, follow us on Twitter @DieselTechForum, or YouTube @DieselTechForum and connect with us on LinkedIn. Get it all by subscribing to Diesel Direct (email us: dtf@dieselforum.org) for a monthly wrap-up of clean diesel news, events, policy analysis and more direct to your inbox.
March 12, 2018

Alec Messina
Director
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

ATTN: VW Settlement

Dear Director Messina:

On behalf of the Diesel Technology Forum, I submit these comments regarding the draft Beneficiary Mitigation Plan ("Plan") published by the Illinois Environmental Protection Agency concerning the use of $109 million in Environmental Mitigation Trust Funds. By way of background, the Diesel Technology Forum represents manufacturers and suppliers of diesel engines, vehicles and equipment. The Forum is a not-for-profit educational organization dedicated to raising awareness of the clean air and economic benefits of clean diesel technology. More information on the Forum is available at www.dieselforum.org.

Summary

The key outcome of the Plan should be to maximize NOx reduction and we believe the draft Plan recently published by Illinois EPA makes significant progress towards achieving this for its residents by sufficiently funding the most effective solutions.

Investments in clean diesel technologies will deliver the most emission reductions to the priority regions identified in the Plan but will also reduce emissions across the entire state. From the variety of off-road equipment to the fleet of on-road vehicles, clean diesel technology will deliver emission reductions in a cost effective way. We commend Illinois for its thoughtful allocation approach that balances the funding opportunity with immediate benefits from available technologies.

Significant Benefits Will Be Delivered by Clean Diesel Off-Road Equipment

The draft Plan anticipates that 94 percent of the 1,800 tons of emission reductions are expected to be delivered by engine upgrades in the fleet of switchers, passenger locomotives, tugs and ferries in operation within the state. Clean diesel technology with near-zero emissions are now integrated into the latest Tier 4 off-road engines. Replacing the oldest of these large engines with a Tier 3 or Tier 4 model, can deliver enormous emission reductions often with the best cost effectivity.

Research commissioned by the Diesel Technology Forum and the Environmental Defense Fund indicate that replacing these older engines is the best emission reduction option which has better cost effectiveness than other options, as shown in the table below.
How to Make the Most of a $70.6 million Investment for Immediate NOx Reduction

<table>
<thead>
<tr>
<th></th>
<th>Price Per Application</th>
<th># of Equipment Placed into Service for $70.6 million</th>
<th>Anticipated NOx Reduction (lbs) per Year</th>
<th>Total Cost to Effectively Fund a Particular Project</th>
<th>Cost to Remove Each lb of NOx ($/lb)</th>
<th>Total NOx Reduction per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Diesel Switch Locomotive Engine Replacement</td>
<td>$2,600,000</td>
<td>27</td>
<td>18,000</td>
<td>$70,600,000</td>
<td>$144</td>
<td>488,769</td>
</tr>
<tr>
<td>Clean Diesel Tug Boat Engine Replacement</td>
<td>$2,800,000</td>
<td>25</td>
<td>60,000</td>
<td>$70,600,000</td>
<td>$47</td>
<td>1,512,857</td>
</tr>
</tbody>
</table>


Clean Diesel Technology Delivers Significant Emission Reductions for On-Road Vehicles

Of all the technology options available and emerging, clean diesel will achieve the most emission reductions from the fleet of vehicles across Illinois. The latest clean diesel technologies are available to reduce NOx emissions to near zero levels. Strategies that replace old vehicles that perform the most miles with proven and available clean diesel technology will improve emission reductions.

We recognize that alternative fuels including natural gas, propane and all-electric options are available in some heavy-duty on-road vehicles, but the clean diesel option will deliver significantly more reductions. Clean diesel options are lower priced allowing more higher emitting vehicles to be replaced thus delivering more benefits to communities across the state. Clean diesel and compressed natural gas options deliver roughly the same reduction in NOx emissions, however, the better cost effectiveness of the clean diesel model allows more vehicles to be replaced thereby generate greater emission reductions. The analysis also holds true for all-electric vehicles. While they may generate very few NOx emissions, electric vehicles have a much higher price tag that would leave many older and higher emitting vehicles in service.

The analysis below demonstrates how investments in clean diesel vehicles match up relative to alternative fuels. Many more tons of NOx may be reduced for a $32.6 million investment (the allocation identified in the Plan for on-road projects).

How to Make the Most of a $32.6 million Investment for Immediate NOx Reduction

<table>
<thead>
<tr>
<th></th>
<th>Price Per Application</th>
<th># of Vehicles placed into Service for $32.6 million</th>
<th>Anticipated NOx Reduction (lbs) per Year</th>
<th>Total Cost to Effectively Fund a Particular Project</th>
<th>Cost to Remove Each lb of NOx ($/lb)</th>
<th>Total NOx Reduction per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trucks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre 1991 port truck replacement with Clean Diesel</td>
<td>$110,000</td>
<td>642</td>
<td>1,282</td>
<td>$70,600,000</td>
<td>$86</td>
<td>822,811</td>
</tr>
<tr>
<td>pre 1991 port truck replacement with CNG</td>
<td>$140,000</td>
<td>504</td>
<td>1,292</td>
<td>$70,600,000</td>
<td>$108</td>
<td>651,537</td>
</tr>
<tr>
<td>Buses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTR2000 bus with Clean Diesel</td>
<td>$370,000</td>
<td>191</td>
<td>1,062</td>
<td>$70,600,000</td>
<td>$348</td>
<td>202,641</td>
</tr>
<tr>
<td>MTR2000 bus replacement with Hydrogen</td>
<td>$1,200,000</td>
<td>59</td>
<td>1,162</td>
<td>$70,600,000</td>
<td>$1,033</td>
<td>68,364</td>
</tr>
<tr>
<td>MTR2000 bus replacement with Battery-Electric</td>
<td>$880,000</td>
<td>80</td>
<td>1,162</td>
<td>$70,600,000</td>
<td>$757</td>
<td>93,224</td>
</tr>
</tbody>
</table>


Diesel technology is the technology of choice for Illinois’ commercial vehicle owners and transit bus operators. Programs to incentivize the introduction of alternative fuels in these categories of on-road vehicles has not introduced these technologies in any large numbers to yield significant emission reductions. Introducing more of the latest generation clean diesel technologies will do the most to generate these benefits. Replacing older on-
highway vehicles with clean diesel technologies does not require the additional expensive investments in refueling or recharging infrastructure.

<table>
<thead>
<tr>
<th>Class 3-8 Trucks</th>
<th>Class 8 Trucks</th>
<th>Transit Buses</th>
<th>School Buses</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNG 0.2%</td>
<td>CNG 0.40%</td>
<td>CNG 1.50%</td>
<td>CNG 0.30%</td>
</tr>
<tr>
<td>Gas 17.0%</td>
<td>Gas 0.00%</td>
<td>Electric 0.40%</td>
<td>GAS 0.00%</td>
</tr>
<tr>
<td>Diesel 83.0%</td>
<td>Diesel 99.40%</td>
<td>DIESEL 98.10%</td>
<td>DIESEL 97.00%</td>
</tr>
</tbody>
</table>

SOURCE: Diesel Technology Forum analysis of 2016 vehicle-in-operation data provided by HIS Markit

Summary
We commend Illinois for its thoughtful approach that will accelerate real clean air benefits in key communities in the state. From larger off-road engines that power switchers, ferries and passenger locomotives to commercial on-highway vehicles, the latest proven and available clean diesel technologies will deliver the most benefits for communities across Illinois.

Illinois will undoubtedly receive many arguments and proposals for investing in various alternative fuels and technologies or charging infrastructure investments for electric vehicles. The costs are expected to be higher and thus the incremental NOx reduction benefits will be lower compared with clean diesel replacement options. Alternate fuels or electric vehicles are simply not the best option for reducing emissions to benefit Illinois residents.

Thank you for the opportunity to provide insights concerning the benefits of greater investments in clean diesel technology. Going forward, the Diesel Technology Forum looks forward to providing any additional analysis or insight to Illinois EPA as the state considers efforts to implement strategies to make the most of the Trust. Please contact us at (301) 668-7230 with any questions or concerns.

Very truly yours,

Allen R. Schaeffer
Executive Director
Tug and Switcher Engine Upgrades Offer Most Cost-Effective Option for VW Funds, Research Shows

New Research Demonstrates the Significant Emission Reduction and Cost-Saving Benefits of Clean Diesel Large Engine Upgrades

March 8, 2018 (WASHINGTON) – Clean diesel technology upgrades for large tug and switcher locomotive engines cost only $4,379 to $15,201 per ton of nitrogen oxides (NOx), compared to more than $30,000 per ton of NOx for many other diesel emission reduction projects.

The Diesel Technology Forum (DTF) and the Environmental Defense Fund (EDF) today released a report documenting the significant emission reduction benefits that can be gained by replacing older engines in tug boats and switcher locomotives with the latest clean diesel models. Funds from Volkswagen’s (VW) $2.9 billion environmental trust, established to mitigate for the excess emissions resulting from defeat devices on 590,000 diesel vehicles, can be used to help pay the cost of repowering these and other old diesel engines.

The joint research estimates that replacing older engines in a typical tug boat with the latest clean diesel model that meets the latest emissions milestones can eliminate on average 14.9 tons of NOx emissions per year. A similar activity for switchers can reduce NOx emissions by 9.0 tons per year.

DTF and EDF’s research confirms that upgrading tug and switcher engines to the latest clean diesel technology offers the most cost-effective option for reducing diesel emissions. Replacing tugboat engines with clean diesel technology costs on average $4,379 per ton of NOx eliminated, while upgrading a switcher engine costs $15,201 per ton.

“The substantial reductions possible with clean diesel replacements offer great news for communities near ports and rail yards. These areas are often among those most vulnerable to smog-forming compounds like NOx, so residents there stand to reap the greatest benefits,” said Allen Schaeffer, DTF Executive Director. “While engine replacement projects are costly, the return on the investment on a dollar-per-ton of emissions reduced makes these projects a compelling choice. States looking to maximize cost-effective investments to reduce NOx emissions should prioritize clean diesel upgrades for tug and switcher engines.”

“Many tugs and switchers operate in ports that fail to meet federal health-based air quality standards,” said Dr. Elena Craft, EDF Senior Health Scientist. “Repowering older tug and switcher engines can deliver cleaner, healthier air faster to at-risk communities near ports. These new engines also help reduce carbon dioxide emissions and black carbon, two important climate pollutants.”
Starting in 2015, new clean diesel engines used in marine applications and switcher locomotives in the United States were required to meet Tier 4 emissions standards. Relative to previous generations of technology, the latest clean diesel technologies can reduce emissions, including NOx and fine particle emissions (PM2.5), by 88 percent to 95 percent. While the latest clean diesel technologies are ready and available to reduce emissions, the U.S. Environmental Protection Agency estimates that by 2020, unless action is taken, only 5 percent of the switch locomotive and 3 percent of the marine workboat fleets will be powered by these clean technologies.

“Right now, state governments have an opportunity to get more of these clean technologies out in the field to deliver immediate emission reductions for communities near port operations,” said Schaeffer. “The recent settlement with VW established an environmental remediation program that will soon provide $2.9 billion to states for the sole purpose of reducing NOx emissions. Policymakers looking to reduce emissions quickly for communities near ports and rail lines should consider these highly cost-effective clean diesel solutions.”

Media Contacts

Diesel Technology Forum:
Sarah Dirndorfer, Manager of Media Relations
sdirndorfer@dieselforum.org
301.668.7230 (o) 301.706.8276 (c)

Environmental Defense Fund:
Shira Langer, Media Relations
slanger@edf.org
202.572.3254 (o)

The Diesel Technology Forum is a non-profit organization dedicated to raising awareness about the importance of diesel engines, fuel and technology. Forum members are leaders in clean diesel technology and represent the three key elements of the modern clean-diesel system: advanced engines, vehicles and equipment, cleaner diesel fuel and emissions-control systems. For more information, visit www.dieselforum.org. For the latest insights and information from the leaders in clean diesel technology, join us on Facebook, follow us on Twitter @DieselTechForum, or YouTube @DieselTechForum and connect with us on LinkedIn. Get it all by subscribing to our newsletter Diesel Direct for a weekly wrap-up of clean diesel news, policy analysis and more direct to your inbox.

Environmental Defense Fund (edf.org), a leading international nonprofit organization, creates transformational solutions to the most serious environmental problems. EDF links science, economics, law, and innovative private-sector partnerships. Connect with us on Twitter, Facebook, and our Energy Exchange blog.
Hi Brad. Good speaking with you today about the VW settlement. Please send me the web address for your VW updates and add me to the listserv. I will definitely keep you posted if/as I identify any freight switcher replacement or re-power projects in Illinois. The Port of Chicago, for instance, outsources all of its rail service to third party companies, other Class I railroads or private intermodal facilities.

In addition I want to make your team aware of the bigger picture of my company’s work. Strategic Rail Finance has been a trusted advisor to railroads, shippers, transloaders, ports, government, and rail-related businesses for over 23 years. We have completed projects in 43 US states and Canadian provinces. While our roots are in railroad financing, we also advise companies on rail business development, land use, operations, equipment, related industrial development, and public policy development.

We specialize in the integration of public and private capital in comprehensive financial strategies that expand capital access, reduce costs, and better allocate financial risk. Our advisory and capital work is grounded in business realities and pragmatic opportunity identification and development. When we create a “rail plan”, its ready for execution, not the shelf. It incorporates rail infrastructure development, freight transportation land use strategies, and business growth.

SRF is presently working on several port projects, including advising the Port of New Orleans on matters relating to the New Orleans Public Belt Railway and performing valuation and commercial feasibility analysis for proposed rail capital projects at Port Bienville, Mississippi. SRF also recently completed financings for a large transloading company operating nine facilities at southern US ports, refinancing its equipment pool and operating lines of credit, structuring project financing for an LME metals warehouse and grain storage facility with barge-to-rail transloading equipment.

Here is an easy link to learn more at Strategic Rail Finance case studies.

Thanks Brad.
Cliff
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IEPA VW Settlement,

IEPA,

I would like to thank you for the opportunity to provide public comment concerning the VW settlement funds allocated to Illinois.

I strongly believe that the IEPA should dedicate a portion of this plan toward environmental justice initiatives. Furthermore, I am of the opinion that the State's plan should do more to fund and encourage electrification of the transportation sector. This infusion of funds represents an unprecedented opportunity to advance the goal of a zero-emission, completely-electrified, more efficient transportation network. Furthermore, the IEPA should restrict funding for diesel vehicles and also prohibit natural gas from fracking as a potential recipient of funding; these technologies are remnants of a past we must leave behind if we are to realize an environmentally-healthy future.

Thank you for your consideration.

Ryan Burgess
Hi Darwin,

Hope you are well. I understand that the IEPA is currently accepting public comment on its draft Beneficiary Mitigation Plan until April 13. As this process progresses, I was curious if you, or someone at the IEPA, could assist with providing resources regarding what types of local government projects may be funded as part of the settlement.

We are in the beginning stages of identifying vehicles and equipment in our fleet that may be good candidates for an alternative fuel conversion, and we want to be ready in case the projects we identify align with the settlement’s parameters.

Thank you,
Sam

--

Sam Barghi
Public Works Management Analyst | Village of Carol Stream
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Dear Sir/Madam,

On behalf of the Bronzeville Energy Collaborative (BEC) and Ellington Energy we are submitting an input that we believe to be significant in reducing NOx emissions. We further believe, the below input, if funded, meets the purpose of the ZEV investment component.

**Wireless Charging infrastructure for Electrical Vehicles to be used by tugs, buses, public transportation, autos and trucks.** Implemented utilizing the SAE J2954 Standard. Thank you for the opportunity to input.

In addition, existing buses, public transportation, autos and trucks can also be wireless retrofitted, thereby, compounding the significance of the wireless charging infrastructure.

Best,

Ellington Ellis

Ellington Energy, LLC
www.ellingtonenergy.us

Polsky Exchange Member
University of Chicago
Hi Brad,
I had talked with Julie and Alec about the calculations that were done for the decision-making on the VW settlement. Is it possible to FOIA those in order to better understand their thinking and to structure our comments so that they are in a similar format?

For example, in our conversation, it was related that electronic ground services equipment at an airport like O’Hare does not generate as many tons NOx saved per dollar spent on electrification compared to other NOx sources. I would like to see how that was calculated, to better respond.

Let me know your thoughts.

Thanks!

Maria L. Race
Director, Sustainability and Air Emission Strategy & Programs
United Airlines
Yates, Evan

From: [Redacted]
Sent: Thursday, March 22, 2018 10:35 AM
To: EPA.VWSettlement
Cc: [Redacted]
Subject: [External] UPS Comments on VW Settlement Draft Mitigation Plan
Attachments: Illinois VW Settlement Comments.docx

To Whom It May Concern:

Please see attached comments from UPS on the proposed VW Settlement Mitigation Plan for Illinois. We look forward to working with your agency. Please don’t hesitate to reach out if you have any questions.

Thanks,
Nick

Nick D’Andrea
UPS
Vice President, Public Affairs

[Redacted]
March 19, 2018

To Whom It May Concern:

Thank you for the opportunity to provide comments on Illinois’ VW Mitigation Plan.

UPS was founded almost 110 years ago as messenger service and has turned into one of the largest package delivery companies in the world. We currently operate in 220 countries and deliver over 4.7 billion packages each year. With a fleet of over 110,000 vehicles, efficiency is key to our operational success. At the same time, UPS is committed to reducing greenhouse gas emissions. UPS began with electric vehicles in New York City in the 1930s. We have now grown to over 9,000 alternative fuel vehicles that run on compressed natural gas, liquefied natural gas, propane, electric and even e-bicycles. To date our alternative fueled vehicles have driven over 1 billion miles. These vehicles don’t just reduce greenhouse gas emissions but ensure UPS is being more efficient; thus, more sustainable.

The VW Settlement provides an opportunity for UPS and other carriers to make an investment in alternative fuel technologies because the funds will help drive down the cost differential for the equipment. While equipment prices have come down some, natural gas and electric vehicles are sometimes two or three times the cost of a gasoline or diesel vehicle. This is why the VW Settlement funds will provide much needed incentives to those wishing to switch to a cleaner burning vehicle.

UPS recommendations on Illinois’ VW Settlement Mitigation Plan:

Recommendation #1: Funding for government entities should be the same as those for non-government entities.

UPS believes that states can have a bigger impact, dollar for dollar, by deploying as many low emitting vehicles on the road as possible. If government entities use all of the funds, the impact will be muted as opposed to allowing more cost-share with private entities and maximizing vehicles deployed.

Recommendation #2: While the VW Settlement states electric vehicles can receive up to 75% reimbursement and 25% for natural gas, that doesn’t mean it can’t be negotiated.

UPS and other carriers who can make a large impact on air quality and have the capital to deploy large quantities of vehicles should have the ability to negotiate with the State of Illinois on an arrangement that benefits the state and the private companies wishing to make the investment. For example, a company that wants to deploy both natural gas vehicles and electric vehicles could negotiate with the state for 50% reimbursement on electric vehicles and a 20% reimbursement for natural gas or some other variation. This would allow for the state to fund large scale projects while preserving money for other smaller projects. This would also be more manageable than providing a generic number and being held to it for all projects. Projects that have the biggest impact and reduce the most of amount of NOx, per dollar spent, should get the largest amount of funding.

Recommendation #3: Entities who have experience with alternative fuel vehicles should be given first priority for funding.
Entities who already have deployed alternative fuel vehicles such as natural gas and electric vehicles understand how to maximize their efficiency. Many have also worked out the issues with bringing online a new fleet of vehicles. In addition, many of these entities already have the infrastructure in place making those “shovel ready” projects which can be executed more quickly over those entities who are non-experienced.

Thanks again for the opportunity to provide comments and we look forward to working with the State of Illinois to use these funds in a manner that will reduce the most amount of NOx while maximizing Illinois’ VW settlement funds.

Sincerely,

Nick D’Andrea
Vice President, Public Affairs
UPS
Is railyard cargo handling equipment including in the category of Off-Road Equipment? It is not specifically listed under Section D. Categories of Eligible Mitigation Actions and Projected Allocations of Trust Funds, but under the Trust Agreement outlined in Section A. Beneficiary Mitigation Plan Requirements, “Forklifts and Port Cargo Handling Equipment” is a category that is eligible for funding. Railyard equipment would be 1) yard tractors 2) rubber tire gantry cranes and 2) side loaders.

Are electrical improvements to the grid (in order to supply the necessary power onsite) included in funding? BNSF has experience with projects where grid improvements to the site were necessary in order to supply charging for all-electric yard tractors. The project funding source did not cover grid improvement costs (it only covered charging stations for the vehicles) and therefore, the project did not proceed.

If you have questions/need clarification on any of the items above, please do not hesitate to reach out.

Amanda Marruffo
Senior Manager Environmental Operations (Air Quality)

BNSF
Railway
From: Joe Wright
Sent: Thursday, March 22, 2018 1:52 PM
To: Frost, Brad <brad.frost@illinois.gov>; Mohr, Kent <kent.mohr@centralstatesbus.com>; Jeff Reitz <jeff.reitz@centralstatesbus.com>
Cc: [External] Blue Bird Electric School Bus
Subject: [External] Blue Bird Electric School Bus

Mr. Frost and Mr. Mohr,

Thanks again for taking the time today to discuss the VW $$s. Attached is the brochure for the all-electric Blue Bird School Bus.

Respectfully,

Joe Wright
Joseph P. Wright
Director of School Bus Sales
Arkansas/Missouri/Southern Illinois
Central States Bus Sales, Inc.
www.centralstatesbus.com

ATTENTION:
Central States Bus Sales, Inc. has moved the Missouri Corporate Headquarters to a new address located at

From: Frost, Brad
Sent: Thursday, March 22, 2018 1:37 PM
To: Joe Wright <jwright@centralstatesbus.com>
Subject: Attached Image

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error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
BLUE BIRD
ALL AMERICAN ELECTRIC

BLUE BIRD

SCHOOL BUS
Blue Bird was first to market electric school buses in 1994. With advances in battery technology, we can now offer efficient and affordable electric-powered buses.

### Body Specifications

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Multiple floor plans available with passenger seating up to 61</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior Width</td>
<td>96&quot;</td>
</tr>
<tr>
<td>Interior Width</td>
<td>90 3/4&quot;</td>
</tr>
<tr>
<td>Aisle Width</td>
<td>Varies by Floor plan</td>
</tr>
<tr>
<td>Skirt Length</td>
<td>19 3/4&quot;, 25 3/4&quot;</td>
</tr>
<tr>
<td>Interior Height</td>
<td>77&quot;</td>
</tr>
<tr>
<td>Overall Height</td>
<td>122&quot;-128&quot; depending on options</td>
</tr>
<tr>
<td>Wheelbase</td>
<td>245&quot;/259&quot;/273&quot;</td>
</tr>
<tr>
<td>Front Overhang</td>
<td>95&quot; with standard steel bumper</td>
</tr>
<tr>
<td>Rear Overhang</td>
<td>122&quot; with standard steel bumper</td>
</tr>
<tr>
<td>Brakes</td>
<td>4-wheel air drum and air disc brakes with 4-channel anti-lock brake system</td>
</tr>
<tr>
<td>Suspension</td>
<td>Soft ride front leaf spring suspension; Two-stage steel leaf rear spring suspension system (ratings vary by capacity); Air Suspension available</td>
</tr>
<tr>
<td>Steering</td>
<td>Tilt &amp; telescoping steering column</td>
</tr>
<tr>
<td>GVWR</td>
<td>Up to 36,200 lbs.</td>
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</table>

### EV Power Specifications

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>Lithium Ion NMC</th>
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</thead>
<tbody>
<tr>
<td>Battery Capacity</td>
<td>150 kWh</td>
</tr>
<tr>
<td>Miles Per Charge</td>
<td>Up to 100 miles, dependent on drive cycle, driver behavior, and accessory usage</td>
</tr>
<tr>
<td>Recharge Time</td>
<td>Function of charger - for level 2, less than 8 hours</td>
</tr>
<tr>
<td>Rated Power</td>
<td>Approximately 315 HP</td>
</tr>
<tr>
<td>Rated Torque</td>
<td>Approximately 2,176 ft-lbs.</td>
</tr>
<tr>
<td>Emissions Certification</td>
<td>EPA and CARB</td>
</tr>
</tbody>
</table>

*Powered by our Electric Partners:*

- Adomani
- Efficient Drivetrains®
Dear Sir/Madam,

Leverage trust funds by linking to other programs. Leverage their facility and resources to accelerate the development and use of smart-grid integrated, electrified transportation within urban and suburban areas. Supports smart park and ride hub for electrified transportation charging infrastructure for community and long distance travel.

Thank you.

Global Battery Solutions
Sybesma Electronics

Ellington Haywood Ellis

Ellington Haywood Ellis
Thank you for the opportunity participate in the public input process for the draft benefit mitigation plan for the Volkswagen settlement. Please accept the attached comments.

Liz Hobart, Government Relations Manager
GROWMARK, Inc.
www.growmark.com

This email and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are not the intended recipient, please notify the sender immediately.
March 27, 2018

EPA.VWSettlement@illinois.gov
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

RE: Volkswagen Beneficiary Mitigation Plan

GROWMARK appreciates the opportunity to comment on the Draft Beneficiary Mitigation Plan (Volkswagen Environmental Mitigation Trust Agreement). The Volkswagen Settlement presents a unique opportunity for our state to accelerate the adoption of environmentally-friendly alternative fueled vehicles.

One great benefactor of the settlement would be Illinois school children and their districts across the state. We commend the recognition of school bus projects in the Beneficiary Mitigation Plan. Illinois school districts and their transportation providers deserve this lifeline to upgrade their fleets with environmentally-friendly alternative fuels that fit their needs.

However, we encourage you to amend the category for the projected allocations of trust funds titled “All Electric School Bus Projects” to allow Illinois school districts and their transportation providers to identify other environmentally-friendly alternative fuels such as new clean diesel, natural gas, propane, and hydrogen versions in addition to electric as referenced in “On Road Projects” category. School districts can cover large geographic areas with many routes beyond the potential range of electric buses. Opportunities for all of Illinois school districts to apply for clean fuel bus funding assistance should also be allowed by this program.

There are already many Illinois school districts that have buses running on clean burning fuel. Expanding the allocation to include several options of environmentally-friendly alternative fuels provides flexibility with long-term savings for school districts as school transportation budgets continue to shrink. It allows the choice to be made with consideration to the initial investment costs, ongoing maintenance costs, and the transportation needs of the school district.

Thank you for your consideration of this request.

Sincerely,

Liz Hobart
Government Relations Manager
GROWMARK, Inc.

*GROWMARK is a regional cooperative providing agriculture-related products and services, as well as grain marketing in 43 states and Ontario, Canada. GROWMARK owns the FS trademark, which is used by affiliated member cooperatives. The FS brand represents knowledgeable, experienced professionals acting with integrity and dedication to serve more than 100,000 customers. More information is available at [www.growmark.com](http://www.growmark.com).*
Dear Sirs;

I am writing in support of the VW Mitigation Fund Grant Beneficiary Mitigation Plan (BMP) that our department has recently become aware of.

Updating our current fleet of Fire Apparatus with state of the art, safer, reliable vehicles has been a major challenge due to our budgetary constraints and the property tax extension limitation law, which severely limits our ability to purchase and upgrade our aging fleet of fire engines.

We have a unit in service currently, a 1996 Pierce Lance Diesel Engine, which has severe mechanical issues, and is in dire need of replacement. A replacement engine would allow for a reliable, safer response to our personnel and the community we serve. The cost of a replacement unit is $425,000.00; an expense we have no funding for at this time.

Grants programs like yours that are offered to the local emergency agencies will accomplish the mission of improving air quality by removing aging diesel equipped vehicles, and increasing community sustainability by offering Fire Districts like ours a funding alternative for major purchases such as these without raising property taxes or debt levels to accomplish our necessary mission.

Thank you for including us as stakeholders and allowing us to offer our feedback on this great program.

Timothy Sarhage
Fire Chief
Palos Heights Fire Protection District

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Hello,

Find attached Caterpillar's comments on the IL BMP. Please contact me with any questions.

Best Regards,
Glenn

Glenn M Luksik / Verifications Manager / Global Regulatory Affairs

This email is intended only for the use of the individual or entity to which it is addressed and may contain information that is PRIVILEGED and/or CONFIDENTIAL. If you are not the intended recipient of this email, please delete it and any attachments, without opening them, immediately.
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  

March 23, 2018  

Re: Caterpillar Inc. comments regarding Illinois’s Request For Information on the Illinois Beneficiary Mitigation Plan.  

Caterpillar appreciates the opportunity to comment on Illinois’s Beneficiary Mitigation Plan for the State’s share of the $2.9B Mitigation Trust Fund (MTF) established under the Volkswagen Consent Decree. Pursuant to section 2.0.3 of the 2016 Consent Decree¹, the primary purpose of the Mitigation Trust Fund is to fund Eligible Mitigation Actions which have the goal of reducing NOx emissions in the United States. Caterpillar believes that Illinois’s plan meets this objective and welcomes Illinois’ focusing funds towards Eligible Mitigation Actions which are more cost effective for the NOx reduction benefits.  

Comment 1: Illinois investing its Mitigation Trust Funds in cost-effective Eligible Mitigation Actions will realize greater NOx reductions and better meet the stated purpose of the Mitigation Trust Fund.  

Marine and locomotive have significantly longer service lives, higher load factors and higher usage rates than on-highway vehicles. As a result, emission reduction solutions offered by Caterpillar for these sectors have cost effectiveness that are up to 200 times better² than on highway.  

Some states have allocated a large portion of their Mitigation Trust Funds to fund electric and CNG powered on-highway vehicles, including buses. A comparison of cost effectiveness of Mitigation Actions to marine and locomotive options shows that buses obtain less NOx emissions reductions for a much higher cost.  

Illinois is investing $10 Mil towards electric school buses, when the cost effectiveness for NOx reduction is high relative to other mitigation options. Total cost effectiveness for CNG school buses is approximately $440,000/ton³ (lifetime) and more than twice that for electric⁴ at $976,568/ton.  

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¹ Order Granting the United States’ Motion to Enter Proposed Consent Decree, In re: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products Liability Litigation, Case No. 3:15-md-02672 (N.D. Cal., Oct. 25, 2016) ("2016 Consent Decree")  
² See Figure 3  
There are several factors contributing to this poor cost effectiveness.

School buses:
1. Experience relatively low usage, approximately 12,000 mi/year on average\(^5\).
2. Experience relatively low engine load factors during usage.
3. Are relatively new with an average age of about 9 years and thus have engines that are relatively lower emitting compared to other sectors.\(^6\)

\[ \text{Lifetime NOx reduced with } \$$ 2.925B \text{ of funding at the partial cost effectiveness of the applications listed} \]

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Emission Reduction (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Locomotive: EMD24C rebuilt</td>
<td>777</td>
</tr>
<tr>
<td>Nonroad: C4.5-60 Loader, new Tier 4</td>
<td>1239</td>
</tr>
<tr>
<td>Marine: EMD 16cfi 849F B 1042+ upgrade</td>
<td>5304</td>
</tr>
<tr>
<td>On-road Electric Transit Bus + Changing</td>
<td>65</td>
</tr>
<tr>
<td>On-road Diesel Transit Bus</td>
<td>136</td>
</tr>
<tr>
<td>On-road CNG School Bus</td>
<td>77</td>
</tr>
</tbody>
</table>

\[ \text{Figure 1: NOx emission reductions available with } \$$ 2.93B \text{ of MTF from Figure 3} \]

Figure 1 above illustrates the difference in NOx reductions that could be achieved by applying the same amount of MTF towards reductions in different mobile sectors.

In addition to the higher cost per ton of NOx reduced, electric vehicle grants may be too optimistic about the actual environmental benefits. Currently 41.2\(^7\) of the electric generation in the State comes from the combustion of fossil fuels. Only 5.8% of Illinois’s electricity is renewable. While Illinois and the nation progress slowly towards the decarbonization of the electrical grid, the current sources of renewable electricity generation in the State are typically fully utilized; therefore, sudden increases in electrical demand (such as would occur by adding more EV’s) will likely be met by increased fossil fuel combustion. In contrast, current diesel engines have a CO2 and NOx footprint per kWh that is comparable or slightly better than the average combustion electrical generation source in Illinois.

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\(^5\) [http://www.americanschoolbuscouncil.org/issues/environmental-benefits](http://www.americanschoolbuscouncil.org/issues/environmental-benefits)

Note that NGV America uses an estimate of 15,000 mi/year for their cost effectivity calculations.


\(^7\) U.S. Energy Information Administration, Washington, July 2017 Electric Generation Profile: [https://www.eia.gov/state/?sid=il](https://www.eia.gov/state/?sid=il)
Comment 2: Caterpillar agrees with Illinois on investing a proportional amount of its allocated Trust Fund towards Eligible Mitigation Actions in the nonroad space of marine and locomotive sectors, which have been shown to have better cost effectiveness for the NOx emissions reduced in line with the stated purpose of the Mitigation Trust Fund.

The Illinois “emissions inventory” chart, Figure 2 below, is generated from data published by the EPA\(^8\). It shows that 60.1% of NOx emissions in Illinois arise from the off-road sectors of marine, locomotive, and nonroad mobile sources combined. Illinois has designated a proportional amount (65%) of the Mitigation Trust Funds matching where NOx emissions are produced. Far greater reductions in NOx emissions can be realized through Eligible Mitigation Actions in these sectors due to better cost effectiveness and thus they will help Illinois realize greater NOx reductions compared to other Eligible Mitigation Actions.

\[\text{Illinois MFT Allocation: $108.7 M}\]

\[39.9\% \text{ On-Highway} \]
\[60.1\% \text{ Off-road sectors}\]
\[22.2\% \text{ Marine (Commercial)}\]
\[8.4\% \text{ Locomotives}\]
\[29.5\% \text{ Nonroad}\]

\(\text{Figure 2: Illinois Mobile NOx sources}\)

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According to the EPA Green Book\(^9\), Illinois is listed as being Moderate Nonattainment for Ozone. Illinois is focusing on areas that historically have NAAQS attainment issues and those areas that receive a disproportionate quantity of NOx emissions. The most populated cities typically have the highest on-road NOx emissions and also the highest number of VW vehicles that are involved in the consent decree. Caterpillar’s emission solutions are more cost effective and reduce far more annual tons of NOx than other MTF options. Figure 3 below provides a comparison of NOx reduction cost effectiveness between some key products that Caterpillar can offer in metropolitan areas.

**Figure 3: Cost Effectiveness Comparison**

Total Cost Effectiveness is the total cost of the retrofit, repower, or replacement, divided by the lifetime NOx reduction. Partial Cost Effectiveness is the funded portion of retrofit, repower, or replacement, divided by the lifetime NOx reduction.

Figure 3 above, illustrates the Cost Effectiveness of Caterpillar offerings compared to replacing school/metro buses. If all $2.93B of the MTF money was spent on each of the listed products, it shows that the listed nonroad options could yield up to 200 times more NOx reductions, in tons, for the same money spent. This difference is due to the significantly better partial cost effectiveness of the off-road options as shown in the yellow column above. Although not a mandate of the MTF, the off-road reductions listed above also result in significant PM reductions.

**Comment 3: Illinois is distributing its allocation for funding of emission reductions for marine vessels and switcher/passenger locomotives, in the top NOx counties in Illinois as these Eligible Mitigation Actions provide the most cost-effective NOx reductions and will benefit the urban areas in Illinois most impacted by the VW, Audi and Porsche vehicles.**

Of the Trust Fund’s list of Eligible Mitigation Actions, repowers and upgrade kits for marine vessels and switcher/passenger locomotives provide the most cost-effective NOx reductions for Illinois. The following are just some examples of Eligible Mitigation Actions in these areas.

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\(^9\) USEPA Green Book, 8-hour Ozone (2008)
https://www3.epa.gov/airquality/greenbook/hbtc.html
Switch Locomotives

Illinois has at minimum 124 switcher locomotives in the State that have various reduction options available under the Eligible Mitigation Actions of Appendix D-2, section (3)(d)(1).

Remanufacture Switch Locomotive EMD24 to Tier 4

Total cost effectiveness: $9,411/Ton NOx
Partial cost effectiveness: $3,765/Ton NOx

Marine Tugs

Caterpillar has a very large selection of emission reduction solutions for marine under Eligible Mitigation Actions of Appendix D-2, section (4)(d)(1). Marine repowers have the best cost effectiveness due to their continual rate of use.

EMD 645FB 1042+ upgrade kit w/ NOx reduction

Total cost effectiveness: $1,379/Ton NOx
Partial cost effectiveness: $551/Ton NOx
Closing Remarks

Large engines used in marine and locomotive are often an “invisible fleet”. Buses and trucks receive higher visibility for funding for replacement and retrofits, since they are seen and used daily by the public. Trucks are the starting and end points of a transportation chain that frequently involve locomotive and marine in the middle. But despite a lower visibility for replacement and retrofits, locomotive and marine frequently have long service lives, up to 40 years for some applications. In contrast, school buses typically have a service life of 16 years and public metro buses typically have a service life of 12 years. There is equipment running in this invisible fleet that is over 50 years old. Without incentivizing the replacement or retrofit of engines in this invisible fleet, owners and operators will continue to overhaul the equipment to the same unregulated status for future decades. This is an important sector that makes up over half of Illinois’s Mobile Source NOx emissions.

Based on these facts, Caterpillar commends Illinois’ allocation of funds from the VW Mitigation Trust Fund, to significantly improve the NOx reductions in the state by committing 65% of the MTF allocation to Options 10 (DERA), Option 3 (Freight Switchers), and Option 4 (Marine Tugs and Ferries). The significantly better cost effectiveness of the solutions available under these type of emission solutions justifies a significant allocation to these off-road sectors. This kind of investment will yield the greatest benefit to the State and help Illinois provide improved air quality.

Caterpillar appreciates the opportunity to comment on Illinois’s Beneficiary Mitigation Plan for the Volkswagen, Audi, and Porsche Clean Air Act Settlement Funds. Caterpillar and its dealers are ready to accomplish these replacements and emission retrofits. We look forward to the opportunity to discuss these and more options with the Illinois EPA.

Sincerely,

Rey Agama
Global Regulatory Affairs Manager
Caterpillar Inc.

JRA:gl
Dear Illinois EPA,

Thank you for the opportunity to provide public comment concerning the Volkswagen settlement funds allocated to Illinois. First, I ask that the Agency take time to involve all stakeholders and expand outreach to maximize public engagement and participation in how to invest these funds. Other states, including several Midwestern states, have fostered lengthy public stakeholder processes that in some cases began well over a year ago. Illinois is only providing six weeks for interested members of the public to weigh in on a document that was created behind closed doors by unknown parties. IEPA should have held public hearings months ago to foster development of a such a document. But given it chose not to do so, going forward it should at least hold multiple public hearings and provide additional time for the public to comment on the draft it produced without public input.

Illinois should take the opportunity to carve out 15 percent of the Volkswagen funding specifically for expanding publicly accessible light duty vehicle electric charging infrastructure. By 2019, over a millions electric vehicles will likely be on the nation’s roadways. Illinois needs to be able to capture the accelerating health and environmental benefits of this transition, especially as it is occurring in parallel with massive investments in clean solar- and wind-generated electricity driven by the Illinois Future Energy Job Act. Electrifying the transportation sector in Illinois should be a top priority towards eliminating transportation emissions and increasing the long term health benefits that follow. As more and more electricity in Illinois comes from zero emission sources, electric vehicles in Illinois will only get cleaner with every year going forward, both in terms of dangerous smog and soot pollution as well as in terms of greenhouse gases driving catastrophic climate change; Smog, soot and extreme climate change are all significant threats to public health, especially for people living with lung disease.

I am heartened to see electric school buses receiving 10 percent of the funding as school children and the communities in which they live will reap the benefits of zero emission vehicles. This should be at least double this percentage, with provisions to provide additional assistance to low income and environmental justice communities. As of now, it appears that Agency has placed communities where school districts contract bus service at a disadvantage; public school districts that own buses will only have to match 25 percent of the cost of an electric school bus, but districts that rely on contracting with private firms to provide school bus transportation, including the largest school district in the state, face a much higher 50 percent matching fund requirement. This is antithetical to helping at risk environmental justice communities, even though the Agency lists this as one of its concerns.

The Agency should also carve out a significant set aside specifically for electric public transit buses, at least on par with expanded support for electric school buses. Transit buses operate in the most densely populated areas and can travel hundreds of thousands of miles a year in these communities. Electrifying bus transit will reduce local pollution and improve the health of transit patrons and employees, as well as the millions of people living close to transit routes, while nearly eliminating greenhouse gases that threaten the entire state.

Thank you.

Dr. Jennifer Ryan
From: Frost, Brad
Sent: Friday, March 30, 2018 11:25 AM
To: EPA.VWSettlement
Cc: Armitage, Julie; Mohr, Kent
Subject: FW: Reminder - VW Mitigation Plan Briefing - Apr 3 - live streaming option

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From: Georgeann Duberstein [redacted]
Sent: Friday, March 30, 2018 11:09 AM
To: Edith Makra [redacted]
Cc: Smith Duane [redacted]; Smith Bryan [redacted]; Crabtree Jerry [redacted]; Sidorowicz Amanda [redacted]; John Walton [redacted]; Tony Lindsay [redacted]; Frost, Brad [redacted]; Jack Gray - Elk Grove Village [redacted]; Al Fonk [redacted]; Dave DeMarco [redacted]; Crowley Ken [redacted]
Subject: [External] Re: Reminder - VW Mitigation Plan Briefing - Apr 3 - live streaming option

Put it toward the construction of route 53!

Sent from my Verizon, Samsung Galaxy smartphone

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Original message ---
From: Edith Makra [redacted]
Date: 3/30/18 11:06 AM (GMT-06:00)
To: Edith Makra [redacted]
Cc: "Smith Duane [redacted]" [redacted], "Smith Bryan [redacted]" [redacted], "Crabtree Jerry [redacted]" [redacted], "Sidorowicz Amanda [redacted]" [redacted], "John Walton [redacted]" [redacted], "Tony Lindsay [redacted]" [redacted], "Bingham, Samantha [redacted]" [redacted], "Samantha Bluemer [redacted]" [redacted], "Frost Brad [redacted]" [redacted], "Al Fonk [redacted]" [redacted], "Dave DeMarco [redacted]" [redacted], "Crowley Ken [redacted]" [redacted]
Subject: Reminder - VW Mitigation Plan Briefing - Apr 3 - live streaming option

Environment Committee and Greenest Region Compact Communities,

Reminder — The MMC Environment Committee is hosting a meeting for public officials to learn about and offer feedback on Illinois EPA’s plan to spend its share of a multi-billion dollar Volkswagen Settlement:
April 3, 2018, 9:30 AM to noon
Moraine Valley Community College, Building M,

Morraine Valley CC will offer live video streaming of the meeting to allow remote participation (directions provided to registrants).
Please register here

Illinois has been allocated more than $108 million dollars after it was discovered Volkswagen installed emissions cheating software in certain diesel vehicles. Illinois EPA will present this Beneficiary Mitigation Plan (BMP) and describe expected benefits for Illinois communities and public agencies. The Chicago Area Clean Cities Coalition will also contribute to the discussion. Please invite all interested staff and stakeholders to attend.

The Plan (BMP) is open for public comment until April 13, 2018. Representatives of public agencies are encouraged to learn about the plan; consider how it might be useful in achieving community sustainability goals; and provide feedback at this meeting and through an online Survey.

The draft BMP and link to the Survey are available on the Illinois EPA’s Volkswagen Settlement webpage (http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index) along with helpful background information and graphics.

The Metropolitan Mayors Caucus has studied sustainability priorities of member municipalities and found a common interest in greener public fleets. The consensus sustainability pledge, the Greenest Region Compact (GRC) thus includes the goal to, “operate a safe, clean and efficient fleet”. The GRC has now been formally adopted by 70 communities in the region. Funding resulting from the Illinois Beneficiary Mitigation Plan could help address this green fleet goal.

You may register either through our event page or by accepting the Outlook calendar invitation sent previously.

Edith Makra, ISSP-SA
Director of Environmental Initiatives
Metropolitan Mayors Caucus

Adopt the Greenest Region Compact 2

www.mayorscaucus.org

State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff
communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
Our current diesel driven fleet consists of the following which do NOT meet the Tier 4 emissions standards:

Tandem axle Trucks = 7
Motor Graders = 2
Backhoe = 1
End Loader = 1
TOTAL NUMBER OF VEHICLES = 11 that do NOT meet Tier 4

We are not within the Priority 1, 2 or 3 areas most likely due to the population but do have a major interstate and a few US Routes running directly through Livingston County. The replacement of the 11 vehicles shown will take over 25 years based on the current funding levels. It would be nice if some consideration could be given to other areas outside of the Priority Areas, but I'm not sure what criteria to suggest other than using Vehicle Miles Traveled which would could then give the Interstate and US routes some weight? Maybe that has already been taken into account.

Please feel free to contact me if you have any questions or comments and thank you for the opportunity of allowing public input regarding this settlement.

Sincerely,

Clay Metcalf, P.E.
County Engineer
Livingston County Hwy.
Please find attached my comments and supporting materials on the draft VW Beneficiary Mitigation Plan developed by Illinois EPA.

Thank you for the opportunity to provide comments on the draft mitigation plan.

Please let me know if you have any questions.

Kevin Greene
Comments to Illinois EPA regarding the

Draft Beneficiary Mitigation Plan; Volkswagen Environmental Mitigation Trust Agreement

Submitted by Kevin Greene

April 2, 2018

Introduction
I appreciate the opportunity to provide comments on the draft beneficiary mitigation plan that was released for public comment on February 28, 2018. The plan outlines how the Illinois Environmental Protection Agency intends to use the settlement funds allocated to the state under the Volkswagen environmental mitigation trust agreement for state beneficiaries. My comments will address the public education and outreach aspects of the state planning process, along with recommendations for program administration and oversight.

As you know, I helped oversee the green fleets/clean diesel program during my last year of employment at IEPA, from approximately September 2015 to October 2016. I worked with the program manager on several tasks that included:

- Adding cost/benefit information to the project application spreadsheet,
- Preparing a work plan for conducting outreach to school districts,
- Identifying opportunities to reach out to more truck fleet owners/operators,
- In collaboration with an agency attorney, updating the procedures for reviewing grant applications.

I also was involved in reviewing specific green fleets/clean diesel project proposals, which included recommending that funding be awarded to several grant applicants, including school districts, school bus companies, park districts, universities and ferry/tugboat operators.

It is with this background, plus 20 years of government experience working on pollution prevention projects involving technical, education and funding assistance, that I offer these comments.

Public Outreach
To begin with, I was disappointed to see that prior to releasing the draft mitigation plan IEPA conducted virtually no general public outreach to inform community members and other interested parties about the VW trust agreement, as well as gather ideas and information to guide the development of the draft plan. This is bewildering because the agency has a long and
successful history of conducting public outreach, as well as working with stakeholder groups, on a variety of environmental policy and planning initiatives.

Past public outreach processes conducted by IEPA have included:

- Hosting regional information meetings with local government officials to make them aware of new regulatory initiatives, as well as technical and grant assistance programs;
- Partnering with small business sectors (dry cleaners, printers and metal platers) on compliance assistance and environmental leadership programs like clean break and the great printers project;
- Bringing together a diverse mix of stakeholder interests (agriculture, environmental groups, sanitary districts, utilities and universities) to work on drafting a statewide nutrient loss reduction strategy;
- Co-hosting informational meetings and attending workshops to educate local governments, community development groups and businesses about cleanup guidelines and funding opportunities for brownfield remediation projects.

If there was ever a time to be proactive in conducting public education and outreach, the development of a state plan involving over $100 million, which could make significant, perhaps transformational, improvements across Illinois’ transportation sector, would certainly fit the bill.

In the case of the VW settlement funds, we are not talking about a planning or regulatory proposal that impacts a particular industrial sector, environmental pollutant or geographic area. The state mitigation plan will impact several geographic areas (highly impacted and vulnerable populations) and multiple air contaminants (nitrogen oxides, particulates, ozone, climate and air toxics). The plan also will involve a wide variety of projects across multiple sectors (both public and private), ranging from replacing aging vehicles like school buses to repowering large diesel engines, to converting truck fleets to low carbon fuels or zero emissions equipment.

Setting priorities for how the settlement funds are distributed for air quality improvement projects will attract a diverse group of stakeholders with relevant responsibilities and experience in the state. These stakeholders include local and regional authorities that have played a key role in the design and implementation of air quality and transportation planning, such as metropolitan planning agencies, regional planning agencies, regional transit authorities, port authorities, airport authorities and regional clean cities coalitions.

Other pertinent stakeholders include local partners that would have valuable insights in how their communities would benefit from the trust agreement. These groups include municipal fleet managers, school districts, transit districts, local government networks; along with organizations representing environmental, public health and environmental justice interests.
Businesses that serve as both suppliers and end users of clean transportation technologies/services will also be important sources of information and ideas on how the settlement funds could be distributed. These interests include school bus operators, fleet managers, fuel conversion contractors, electric vehicle charging, equipment manufacturers, freight services, agriculture, and business trade associations.

It is worth emphasizing that Illinois’ initial allocation from the trust agreement is quite substantial compared to other states in the region, over $100 million. This funding allocation is approximately 10 times the amount of money that has been available at any one time through the agency’s existing green fleets/clean diesel program, which has received diesel emission reduction act and congestion mitigation and air quality improvement program funding over the years.

Given the sizable amount of allocated funds, a high degree of stakeholder interest and mix of possible projects and impacted geographic areas, I would like to note that most states initiated early public education and outreach for their allocation of the settlement funds. These outreach efforts took place before the drafting of a state mitigation plan. The activities ranged from providing information about the trust agreement, to hosting informational meetings and seeking public input on key plan components, with the majority taking place in 2017.

By contrast, IEPA posted a one-page announcement on its web site in summer 2017 that provided little information about the trust agreement and anticipated planning process. It did indicate that informational meetings would be scheduled in the future and that the public should check back for updates.

The agency updated the posting in December 2107 by adding information about the settlement fund, eligible projects, expected benefits and state planning responsibilities. However, it provided no information on how the public could engage in the planning process. It also appears that little to no media information was disseminated about the trust agreement in Illinois.

Surprisingly, with little advance public notice, IEPA released its draft mitigation plan in February 2018, accompanied by a request for online public comments on the plan. The agency also provided an opportunity for citizens to complete a web survey.

**State Outreach Activities**

I believe it is important to review the public education and outreach activities undertaken by other states to highlight how IEPA missed several opportunities to involve community members and stakeholder groups in the development of its draft mitigation plan. As I mentioned earlier, most states conducted their public involvement activities throughout 2017. In fact, a few like Colorado and Ohio began their outreach in fall 2016.
These states realized the settlement funds created opportunities for both broader and deeper public engagement that would be valuable in guiding the development of their mitigation plans. They designed their outreach to including multiple opportunities for early and active involvement, basically with three objectives in mind.

First, these states wanted to make sure that as many community members and stakeholder groups as possible learned about the trust agreement and were kept up to date on state planning activities. Second, the states wanted the public to understand the intent of the settlement funds, types of projects that could be funded, potential air quality impacts, timelines and required elements of the state mitigation plan. Finally, they wanted to gather information and ideas on key issues that would be addressed in the draft plan, including the plan goals, geographic scope, mitigation projects and funding process.

To reach out to the public as they planned on how best to utilize the settlement funds, several states, including the New Mexico Environmental Department and Washington Department of Ecology, engaged in a cross-agency coordination process. The goal of involving multiple partner agencies was to expand public outreach and maximize opportunities for stakeholder engagement. These interagency planning teams included representative of the education, transportation, environmental and natural resources departments in the state (See: https://www.env.nm.gov/vw-settlement/ and https://ecology.wa.gov/About-us/Get-to-know-us/News/2017/Nov-16-VW-settlement-plan).

The next step for states was to create a stakeholder database to keep members of the community informed. For example, both the Colorado Department of Public Health and Environment and the Connecticut Department of Energy and Environmental Protection created an online list serve, in which the public could subscribe to receive information and updates on the planning process (See: https://www.colorado.gov/pacific/cdphe/air-mailing-lists and https://visitor.r20.constantcontact.com/manage/optin?v=001Y1ysmm7Zby2v8N7gpaNE4MiN4p8Mx34vHwAQMgFVYDgstwwSNbp-Ydr0xL5uHzjOn7S639nVxNCUyp368X4-BwVBq5c-RT5dhV2tyt7L1Vz_xSdP0kBvTt4XmWNnenu-vigd_HBwBO30HzvOC_LVjAk1uYGaE8cpyUKn0V6oOagbOD1UXjWYTSe-EwqWfkruaKW2ZWg1S5vvo6cunukXCFhLAbBdzI1MvtrFK0uU%3D).

States also created special mitigation plan web sites that served as public information hubs. The web sites provided information on the “nuts and bolts” of the trust agreement and planning process, in addition to providing contact information where the public could submit suggestions and comments. For example, the Connecticut DEEP and New Jersey Department of Environmental Protection created “frequently asked questions” documents for their web sites to help inform the public about the settlement funds, timelines to spend the funds, how much mitigation funding the state will receive, kinds of projects eligible for funding and how to be

The Ohio Environmental Protection Agency, Missouri Department of Natural Resources and New Mexico Environmental Department added presentations or slideshows to their web sites, summarizing key issues that would be addressed through the mitigation planning process, along with the steps and timelines for developing the state plan and opportunities for public comment (See: http://epa.ohio.gov/Portals/42/documents/VW/Ohio%20VW%20Plan%20Development.pdf, https://dnr.mo.gov/env/apcp/vw/docs/vwpresentation.jeffcity.jan.222018.pdf and https://www.env.nm.gov/wp-content/uploads/2017/03/VWSettlementPresentation_August-2017.pdf).

Prior to the development of their draft mitigation plans, many states hosted informational meetings and conference calls to seek public input on the overall goals of the mitigation plan, geographic areas to target, process for selecting projects and how the funds should be distributed within the allowable uses. For example, the Delaware Department of Natural Resources and Environmental Control issued a request for comments that invited the public to address specific issues on how the settlement money should be distributed, spent, and accounted for (Scc: http://www.dnrec.delaware.gov/Air/Documents/Delaware%20request%20for%20comment%20options.pdf).

The North Carolina Department of Environmental Quality issued a request for information which invited the public to address specific issues, including information on eligible mitigation projects, suggestions on funding and project evaluation priorities, as well as methods the agency could employ to increase participation in solicitations for air quality mitigation projects (See: https://files.nc.gov/nedeq/NC%20VW%20RFI%201112117.pdf?ZLrJnpKQZX4IuDHR9GoUoaJKWkCVsoF). The department received 872 comments, with project ideas totaling $409 million. According to the department, it received “a wide variety of input emphasizing the importance of various issues, needs and providing valuable suggestions.” (See: https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-and-air-quality/volkswagen-settlement/volkswagen).

The Virginia Department of Environmental Quality also issued a request for information, seeking early input from governmental and non-governmental entities on the type and scope of projects that should be funded. Over 100 persons/entities submitted written comments during the informal public comment period (See: www.deq.virginia.gov/Portals/0/DEQ/Air/VWMitigation/VWMitigation.pdf?ver=2017-04-04-110045-327).
The Missouri DNR issued two web surveys to help shape the development of its draft mitigation plan. The surveys, among other things, asked for recommendations on allocation amounts for project types, process for selecting projects and applicants, target geographic areas and fuel preferences (See: https://dnr.mo.gov/env/apcp/vw/docs/vw.second.survey.pdf).

The Ohio EPA created an interested party list of over 4,000 names and received 195 written comments during its initial outreach process. In 2017 the agency held more than 100 meetings and conference calls with stakeholders (See: http://www.epa.ohio.gov/Portals/42/documents/VW/OH%20Draft%20VW%20Beneficiary%20Mitigation%20Plan.pdf). That same year, the Colorado DPHE gave 15 presentations, conducted media interviews, directly contacted more than 450 stakeholder groups and received approximately 120 comments regarding how to spend the settlement funds (See: https://www.colorado.gov/pacific/cdphe/news/VW-settlement).

The Minnesota Pollution Control Agency also sought early input from community members and stakeholders. The agency received 274 comments and over 800 responses from two web surveys. In 2017 the agency held eight public meetings, including an environmental justice listening session in Minneapolis. The agency also held four stakeholder meetings for businesses and organizations with expertise in heavy-duty vehicles and equipment, electric vehicle charging stations and health impacts of air pollution. It also presented to and sought input from several local government and transportation organizations (See: https://www.pca.state.mn.us/sites/default/files/aq-mvp2-32a.pdf). The states typically publicized their informational meetings through news releases, media interviews, email/list serve notifications, stakeholder meetings/calls and social media (Facebook, Twitter, etc.).

Between October 2017 and January 2018, the Missouri DNR held six public meetings about the trust agreement. The oral comments from the meetings appear in videos posted on its webpage. The department also posted an online comment form (See: https://dnr.mo.gov/env/apcp/vw/vw-meetings.htm). It received over 90 online and written comments. The comments have been compiled and posted on its web page (See: https://dnr.mo.gov/env/apcp/vw/docs/vw.comments.pdf). The North Carolina DEQ also summarized the early public comments it received on its web site (See: https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-and-air-quality/volkswagen-settlement/volkswagen).
Informational Meetings

I would like to note that all states that initiated early public education and outreach to guide the development of their draft mitigation plans continued to seek stakeholder input after the draft plans were released to the public. In addition to soliciting additional comments, many held informational meetings on their draft plans to explain how the plan was crafted, answer questions and accept input.

Ohio EPA released its draft mitigation plan in December 2017. The agency hosted regional public information sessions in Cincinnati, Cleveland and Columbus in January 2018 (See: http://epa.ohio.gov/News/OnlineNewsRoom/NewsReleases/TabId/6596/ArticleId/1255/language/en-US/month/12/year/2017/ohio-epa-schedules-public-meetings-on-plans-for-volkswagensettlement.aspx). The plan was also presented to the state general assembly. The Indiana Department of Environmental Management has formed an interagency planning committee and scheduled five public meetings around the state in 2018 to provide information and gather input on its proposed mitigation plan (See: http://www.in.gov/idem/airquality/2712.htm).

In addition to creating a public comment period, the Pennsylvania Department of Environmental Protection held a webinar and several community listening sessions throughout the state in 2017, after it developed a proposed mitigation plan (See: http://www.dep.pa.gov/business/air/volkswagen/pages/environmental-mitigation-trust-agreement.aspx). The Virginia DEQ is also holding a public meeting on its draft plan and eligible mitigation actions under the plan (See: http://www.deq.virginia.gov/Portals/0/DEQ/Air/VWMitigation/notice.pdf?ver=2016-11-15-100015-743).

Given that IEPA conducted very little public education and outreach during the development of its draft mitigation plan, I believe it is critical for the agency to provide a more open and meaningful stakeholder involvement process with the release the draft plan to the public. Like the states above and others have done, IEPA should supplement the current public comment period with a series of regional information meetings. These meetings could take place in the priority geographic areas identified in the draft plan. I also would recommend a meeting in Springfield that is held in conjunction with the environmental and energy legislative committees. This would ensure that general assembly members have an opportunity to be involved in the planning process, given their role in appropriating funding for the state plan.

The regional meetings should be designed to inform the public on how the draft mitigation plan was developed. Following the format used in other states, the agenda should include a presentation summarizing the draft plan and identifying key issues that IEPA is seeking to address through its web survey. The agency should have knowledgeable technical and legal staff
present to answer questions, along with community relations staff that can compile the comments that are received during the meetings. The development of a frequently asked questions document would also be helpful in educating community members about the contents of the plan in a simple and concise format.

In addition to hosting regional information meetings, IEPA should openly and broadly publicize its availability to meet with stakeholder groups that have information or experience in participating in the existing green fleets/clean diesel grant program and/or have knowledge of local fleets and interest in the eligible mitigation actions within their jurisdictions. These stakeholder groups would include local governments and their associations; metropolitan planning organizations in the priority counties; environmental and clean air groups; and clean transportation advocacy groups. Stakeholder meetings would provide an opportunity for more extensive feedback on how the settlement funds should be distributed and the process for soliciting and approving project applications. The agency should have knowledgeable technical and legal staff present at the stakeholder meetings to not only answer questions, but also to ensure a productive dialogue takes place.

Program Oversight
When I started work on the green fleets/clean diesel program in fall 2015, the internal funding decision timeline, from receiving a grant application to issuing the award agreement, averaged 2-4 months. I learned quickly that the grant award timeline was problematic for many applicants, particularly school districts, school bus companies and small fleet operators.

For school bus projects, the challenge was to arrange for the idle-reduction or propane conversion equipment to be installed during the winter or summer holidays when schools were not in session. Small fleet operators, which own delivery trucks, cargo vans or pick-up trucks, also had project scheduling concerns because they didn’t have the flexibility to convert their entire vehicle fleet at one time. They must coordinate with fuel conversion companies that are juggling work orders for multiple clients. Ferry/ tugboat companies could be constrained by lengthy grant approvals, given the complex nature of their engine repowering projects that involve replacing significant components besides the diesel engine. Boat projects typically must be completed during the winter layup period.

In talking recently with representatives of local government and business groups that represent green fleets/clean diesel grant applicants in the state, it appears the agency funding decision timeline is now taking up to 6 months. This is not encouraging news, with the state poised to receive over $100 million in settlement funds for additional air quality improvement projects. To ensure the success of the state mitigation plan, it’s critical that IEPA provide a predictable and efficient administrative process for reviewing and awarding grants under the trust agreement.
While there will be occasional glitches in the grant review process (incomplete applications, unsigned certification forms or outdated W-9 information), my experience with the green fleets/clean diesel program was that these paperwork issues could be addressed in a matter of days or perhaps a week. I believe the primary obstacle to the timely issuance of grant awards is structural in nature; that is, the grant program is located in the bureau of air — a regulatory department.

Each day the bureau of air chief is consumed with a host of complex and far-reaching issues that demand special attention, ranging from issuing facility construction and operating permits to enforcing air quality regulations and operating permits, to conducting air quality modeling to demonstrate compliance with air quality standards. This means non-regulatory matters dealing with grants, compliance assistance and outreach will often take a back seat, while more intractable issues on the regulatory side, particularly related to permitting and compliance, must be worked out.

To overcome this institutional barrier, I would like to recommend that the green fleets/clean diesel program, plus implementation of the VW mitigation plan, be moved as a separate unit to the associate director’s office, which has traditionally been the home to non-regulatory programs at IEPA. The bureau of air staff would still be involved in setting the overall objectives and priorities for the mitigation plan, but day-to-day administration of the grant program (i.e., soliciting, reviewing, awarding and monitoring grants) would be overseen by the associate director. This management approach would help alleviate programmatic challenges at the agency, which require that regulatory matters be prioritized at the highest level.

The current IEPA associate director, Heather Nifong, has significant experience in managing and overseeing grant programs. She was project manager of the brownfields grant program, which was a bureau of land program that provided technical and financial assistance for cleanup of contaminated industrial property. Her current job responsibilities include oversight of the state energy office, which was moved from the Department of Commerce and Economic Opportunity to IEPA in January 2017. The energy office provides grants to businesses, universities and others to promote and utilize renewable energy resources and more efficient equipment and processes. This includes the closeout of a $30+ million grant program for expanding biofuels infrastructure (pumps and tanks) in the state.

Moving program management for the green fleets/clean diesel and VW settlement funds to the associate director’s office would be a good fit and provide opportunities for synergies between the energy and green fleets/clean diesel program staff. It is worth noting that a number of state environmental agencies like Ohio EPA and Michigan Department of Environmental Quality have combined their grant, education and technical assistance programs into one department to achieve a more efficient delivery of information, resources and services. Centralizing non-
regulatory programs also has allowed state environmental agencies to address budgetary and staffing constraints more effectively.

I also would like to recommend that IEPA create a stakeholder advisory committee that would meet regularly and provide input on implementation of both the green fleets/clean diesel program and VW mitigation plan. The mission of the advisory committee would be to ensure the stated goals and objectives of both programs are accomplished in an effective and beneficial manner. The committee would include representatives of local governments, regional authorities, nongovernmental organizations, businesses and trade groups that have relevant information and expertise.

The stakeholder advisory committee could also assist the agency in establishing performance metrics (outputs/outcomes) to measure the quality and effectiveness of the state mitigation plan, in addition to reviewing and making recommendations on how administration of the green fleets/clean diesel program can be enhanced. This would include reviewing the process for soliciting and awarding grants. The committee could help with increasing public awareness of project results, sharing information with stakeholder groups and addressing specific program needs.

A good first task for the advisory committee would be to help IEPA improve the informational resources on its green fleets/clean diesel web site (See: http://www.epa.illinois.gov/topics/air-quality/mobile-sources/illinois-green-fleets/index). The web site provides no background information on how potential grant applicants can reduce vehicle emissions using advanced technologies and alternative fuels funded through the program. There is no information that describes funding opportunities, process for selecting projects, example projects and program results. The web site also doesn’t provide downloadable grant application or certification forms, nor does it list a contact person who can answer questions.

Finally, I would recommend that IEPA issue semiannual reports, which summarize program activity, emissions benefits and other outputs and outcomes achieved under the VW trust agreement. The reports would provide an opportunity to review problems, successes and lessons learned from the funded projects. It would also help determine whether any revisions to the state mitigation plan and funding levels are appropriate or necessary. Regular reporting would provide a method for the agency to oversee the mitigation plan in an open and inclusive manner.

As mentioned earlier, the trust agreement has the potential to be transformational in nature. Not only can it help the transportation sector transition to more efficient, less polluting/zero emission technologies, it also can significantly reduce pollution in areas of the state that have been disproportionately impacted by mobile source emissions. To maximize the potential for environmental and community benefits, it is critical that the settlement funds be effectively and consistently managed, and that the agency look for opportunities to make improvements in the mitigation plan whenever possible.
RE: Comments on the Volkswagen Diesel Emissions Settlement and the Environmental Mitigation Trust Implementation for the States

Dear Julie,

Ozinga was established in 1928 as a small coal and coke yard by Martin Ozinga Sr. who worked tirelessly to create a sustainable business that survived the Great Depression. Martin Sr. transitioned the company to his sons who helped expand the business after their return from service in World War II. With coal and fuel oil on the decline, Ozinga began producing ready mix concrete in the 1950s, which rapidly became the company’s predominant product. During the third generation’s ownership, the company expanded into the downtown Chicago market, supplying concrete for the new Comiskey Park (now Guaranteed Rate Field), the Dan Ryan Expressway, and Soldier Field, among many other notable Chicago projects.

When the fourth-generation took the reins, they continued the company’s commitment to innovation by continuously expanding their product and service offerings to stay ahead of the ever-growing needs of building industry. In 2008, the company began their materials operation to handle all bulk material and transportation needs, which includes logistics services through an extensive network of truck, rail, barge and ship terminals. In 2012, Ozinga unveiled Chicago’s first privately owned natural gas fueling station, and the energy operation has continued to expand its services with CNG fleet fueling solutions; truck service, repair and parts; and custom CNG compressor and station installs.

Over the years, the company has grown into a strategic building partner leading the industry by providing Illinois consumers concrete, aggregate materials, and Natural Gas solutions through a fleet of barges, boats, rail, and the iconic red and white striped concrete mixers. We appreciate the opportunity to provide public input into the design of the Illinois VW Environmental Mitigation Trust (Mitigation Plan). Our proposed plan will mitigate the effects of VW actions and support community efforts to invest in advanced technologies that we are using already in transportation fuels that save energy, reduce emissions and cuts costs.

The VW EMT funds provide an extraordinary opportunity for Illinois as to put significantly cleaner Natural Gas vehicles on the road in public and private fleets. This funding can and should be used to continue the use of cleaner, alternative fuels that offer a cost-effective alternative to funding diesel vehicles.

www.ozinga.com
Ozinga will be deploying the latest Cummins natural gas engines that are the only "near-zero" engines that are certified to perform at 0.02 g/bhp-hr of nitrogen oxide (NOx) emissions or better and should not be confused with diesel engines certified to the 2010 EPA standard of 0.2 g/bhp-hr NOx standard. The 0.02 g/bhp-hr NOx standard requires that engines outperform the federal standard by 90 percent and is the cleanest heavy-duty engine standard today. It also is the lowest level currently recognized under California’s Optional Low-NOx Standard (OLNS) for engines.

Cummins natural gas engines are the only available internal combustion engines that have been certified to California’s 0.02 OLNS and thus are the only true Near Zero engines available in the marketplace today. 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 and delivering the most nitrogen oxide (NOx) emission reductions for the lowest cost. Ozinga’s natural gas Ready Mix trucks are currently transforming the medium- and heavy-duty Illinois transportation sector.

Sustainable: NGVs Maximize Long-Term Emission Reductions

Key Point: Today’s natural gas medium- and heavy-duty engines provide unmatched reductions of smog forming emissions of nitrogen oxides (NOx).

"Near Zero-Emissions": EPA and CARB Certified a Heavy-Duty Natural Gas Engine to 0.02 g Standard

In September 2015, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) certified the world’s first heavy-duty engine that emits oxides of nitrogen (NOx) at levels so low that they are considered at "near-zero" (0.02g NOx/bhp-hr). This is the cleanest commercially available heavy-duty truck engine available in the market today, offering the ability to reduce emissions 90% below even the most stringent U.S. EPA standards.

1. Gladstein, Neandross & Associates, Game Changer Technical White Paper (2016) http://ngvgamechanger.com/, Section 6.4 and Appendix 1. Emissions of low-NOx natural gas engines produce NOx emissions that are comparable to or lower than similar electric drive vehicles in all 50 U.S. states when considering upstream NOx.
NGVs Have Lower NOx Emissions Than All-Electric Trucks

The emission benefits of the new “Near-Zero” engine are well documented in the 2016 Game Changer report issued by Gladstein, Neandross and Associates (GNA)². The GNA report indicates that a truck or bus equipped with a natural gas engine that has been certified to the 0.02 g/bhp-hr Optional Low NOx Standard has tailpipe NOx emissions that are comparable to -- or possibly lower than -- the amount of NOx emitted to produce electricity used to charge a comparable heavy-duty All-Electric Truck.

Critical Insight:
Study Finds that Natural Gas Engines Outperform Diesel Engines in Real World Situations

Natural gas (NG) engines today meet an optional Low NOx standard that is ten times cleaner than the standard required for new diesel and natural gas engines. However, the in-use emission benefits of NG engines could be even more significant.

A recent report published in Environmental Science and Technology³, evaluated in-use emissions of earlier model year NG vehicles and found that NG engines performed much better in real world conditions (i.e., operating within city limits in low-speed, high-idling situations), registering NOx levels that were 96% lower than levels produced by tested diesel engines equipped with the latest emissions controls. The study found that diesel NOx emissions operating in similar conditions produced emissions that were 5 - 7 times higher than in-use certification limits in some cases.

1. See NGVAmerica Comments on the Volkswagen Diesel Emissions Settlement and the Environmental Mitigation Trust Implementation for the States
Related Recommendations for EMT Funding

- Provide a higher level of funding for technologies that are proven to exceed federal emission levels for nitrogen oxides
  - Vehicles with engines certified to California's Optional Low-NOx Standard should receive the highest level of funding (e.g., 25% in the case of private sector vehicle replacements)
  - Use the state's approved DERA plan to fund low-NOx natural gas trucks (i.e., 35% of the replacement cost for private vehicles equipped with low-NOx engines)

- Provide the highest level of funding to applications that will reduce the largest share of NOx emissions
  - Evaluate the main mobile source(s) of NOx emissions in urban and non-attainment areas (Note: In most regions, this means prioritizing funding for short-haul, regional-haul, and refuse trucks)
  - Do not segment the funding – fund the projects that best achieve the most NOx reductions

Dollar-for-Dollar Natural Gas Delivers Greater Numbers of Total Vehicles and Greater Total Tons of NOx Emission Reductions

This is illustrated by the chart below which looks at several different funding options for natural gas and electric vehicles including providing 100% of the cost of new, replacement vehicles for public fleets, using the maximum funding levels specified in the settlement for natural gas and electric vehicles purchased by private fleets, or funding only the incremental cost of new, replacement vehicles. In each case, the deployment of natural gas vehicles (e.g., regional haul trucking, refuse trucks, and transit buses) will provide the most NOx emissions reduction to comply with the EPA's latest national ozone standards.

**EMT Funding $7.5 Million Short Haul Truck Example**

- **Fund 100% of Cost**
  - Number of Vehicles Deployed: 50
  - Tons of NOx Reduced: 21

- **Fund 25% NOx, 75% EV Cost**
  - Number of Vehicles Deployed: 200
  - Tons of NOx Reduced: 57

- **Fund Incremental Cost Only**
  - Number of Vehicles Deployed: 124
  - Tons of NOx Reduced: 57
Critical Insight: Heavy-Duty Electric and Fuel Cell Vehicles are currently NOT Commercially Available

Near-zero-emission internal combustion engines fueled by conventional or renewable natural gas is the only unique fuel-technology Heavy Duty combinations that hold the most promise to successfully transform America’s HDV transportation sector to zero and near-zero emissions.

**Critical Insight:**
**Comparable All-Electric Vehicles Cost 2-3x More Than an NGV**

While actual cost depends on the application, an all-electric medium- or heavy-duty vehicle usually costs two to three times the amount of a comparable vehicle powered by a 0.02 g NOx natural gas engine. As noted above, funding heavy-duty NGVs delivers greater emission reductions than similar projects involving all-electric trucks, and they offer the best ability to reduce emissions on a large scale because the funding will extend further.

Near-zero-emission internal combustion engines fueled by conventional or renewable natural gas are the only option to immediately and cost-effectively provide extremely low NOx and GHG emissions in high-impact HDV sectors.

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

Thank you again for taking time out of your day to meet with Rich DeBoer and myself. As discussed in our meeting, please feel free to reach out for more information on Ozinga and benefits of natural gas vehicles in Illinois.

Sincerely,

Jeffrey Bonnema
Vice President of Fleet Maintenance
I think there should be some consideration into providing funding assistance with infrastructure projects i.e. Make municipal repair shops safe for repair and maintenance of natural gas vehicles. We have a natural gas fueling station in town that we could utilize for fueling any vehicles that we might convert to natural gas but once converted, we could no longer work on them in our municipal repair facility because it is not properly equipped to safely house natural gas vehicles. Should one of these vehicles develop a leak, the natural gas rises and would interact with our heating system causing an explosion. If funding were available to assist in the cost of modifying the building for natural gas repairs, we would be more likely to convert many of our vehicles to natural gas.
Please use the VW Settlement funds (or at least a portion of them) toward renewable energy or improve energy efficiency in the state so that the settlement becomes a gift that continues to give in the future. Investing in both will pay long term dividends in Illinois and will guarantee we make the most of these settlement funds. I would also suggest putting the remainder of the settlement into our underfunded pension funds.

Chris Hein
I don’t personally know the best way to spend these funds but I do know having a closed door meeting with Lobbyists is definitely not the best option for the people of the state of Illinois. Will the people of Illinois get a real chance to voice their opinion? How is this message of how to spend these funds being delivered en masse to the citizens of the state?

It appears to be a typical slick move by our politicians. This time it appears to be Governor Rauner is the slick con man rushing this through for his fellow millionaires.

Richard E. Morrissy
Angry Illinois Resident
As has been well documented in hindsight, vehicle replacement schemes such as "Cash for Clunkers" are a waste of money, distort the market and siphon off money from productive employment. Removal of dirty vehicles and engines from the market would best be accomplished by normal attrition in the budgetary process at no additional expense to the taxpayer. This windfall could then be employed to set up a trust fund for municipalities, counties, interstate roadways and railways in order to fund an ongoing clean up process. Any Illinoisan who travels by foot, bike or car can witness the filthy condition of our roadways. Cleaning this up would have a positive, noticeable effect on the environment and would allow our state to be favorably viewed by all in the country. Another suggestion would be to clean up our rivers and lakes, particularly Lake Michigan. I believe these clean-up projects would be a profoundly better alternative than spending money on wasteful vehicle and engine replacement programs. Programs that would happen by attrition anyway.

Sincerely
Bruce Burton
Hello,

The Village of Winnetka is looking at the possibility of purchasing a "Green Machine" for the cleaning of our brick-paved areas that runs on alternative fuel. Do you know if this type of purchase would quality for the VW reimbursement?

Thank you,

Matt Havlik
Public Works Analyst | Village of Winnetka
The plan you explained to upgrade machinery to produce less pollution sounds like the thing to do with the money.
From: Regan, James
Sent: Thursday, April 05, 2018 7:28 AM
To: EPA.VWSettlement
Subject: [External] VW settlement funds

Spend the money on postage of epa expiration notes and/or encouraging gas station to add availability of E85 ethanol
cleanup / remediate the nasty, foul smelling stench, breath-choking, toxic, illegal dumping superfund site that exists in a heavily populated residential neighborhood at the NE corner of Burris & Adelphi streets in Waukegan, IL 60087 that has polluted the ground water with its toxic chemicals --

..and Senator Dick Durbin ignores letters by the local residents to clean up and remediate this polluted land fill that was created decades ago and allowed to happen by a past corrupt mayor, that took bribes in order to allow manufacturing companies to dump their toxic waste around midnight every night in a neighborhood park that was turned into a toxic industrial waste dumping ground ..

**Illinois e-News Release**

FOR IMMEDIATE RELEASE
April 4, 2018

**Contact:** Kim Biggs
217-558-1536
Kim.Biggs@illinois.gov

**Illinois EPA Extends Deadline to April 20 on Draft Plan to Spend Volkswagen Settlement Funds**

SPRINGFIELD — The Illinois EPA (IEPA) is soliciting public input into its Draft Plan to use the state’s $108 million allocation from the Volkswagen Settlement. The public has been able to provide feedback on the plan since February 28 and will be able to do so until Friday, April 20, 2018.

The IEPA has provided targeted outreach to many groups around the state and has already received nearly 200 formal comments and nearly 100 completed Survey responses to the Draft Plan. In addition, the Agency’s webpage for the Draft Plan has received more than 6,000 pageviews from well over 2,000 unique users.
"We have been having productive conversations with numerous groups around the state and want to provide additional time for comment on a Plan that will positively benefit the health and air quality for millions of Illinoians," said Illinois EPA Director Alec Messina.

The Draft Plan details Illinois’ proposal to remove old, dirty diesel engines from service and replace them with new electric, alternative fuel, and cleaner diesel engines. Illinois EPA developed the draft Beneficiary Mitigation Plan (BMP) with a goal of achieving the maximum NOx emission reductions possible while recognizing the diversity of potential projects that may be available.

Illinois is a crossroads in the American transportation network and has one of the largest mass transit districts in the country, potentially offering significant reductions to mobile source emissions using the Settlement funds. The money can be used over the next 10 years to fund engine replacement projects such as locomotives, tugboats, large and medium trucks, buses, as well as related electric infrastructure that will reduce nitrogen oxide (NOx) emissions in Illinois.

Illinois EPA’s VW Survey, available on its Volkswagen Settlement webpage, was developed to help inform the Agency on projects and administration of funds. The deadline to provide responses to the Survey is likewise extended through April 20, 2018. Input on the Draft Plan, available at www.epa.illinois.gov/topics/air-quality/vw-settlement/index, should be sent to EPA.VWSettlement@illinois.gov.

Attachments

- IEPA Extends Deadline Volkswagen Settlement Funds

To unsubscribe or modify your subscription click the following link https://www2.illinois.gov/gov/pages/CommunicationsManageOptions.aspx?ui=EE467C8-F6D9-4512-8B0B-AF41F4C49010. Please do not forward this email to other individuals or they will have access to your e-Subscription account settings.
Hi
I am submitting written testimony for the IL EPA's Draft VW plan this Friday, April 6 in Chicago. I will not be able to attend. Thank you. Vic

--
Victor White
Superintendent of
Prairieview-Ogden #197

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Dear Senate Environment and Conservation Committee members;

April 5, 2018

I would like to submit my letter as written testimony for the IL EPA’s Draft VW plan this Friday, April 6 in Chicago. I will not be able to attend the hearing in person. I have been following with great interest the news about a new trust fund that will be providing significant dollars to the states for clean air improvement. The U.S. Department of Justice and Volkswagen recently entered into an environment mitigation trust agreement that will provide Illinois with more than 100 million for eligible environmental projects to offset the air pollution damage caused by VW’s pollution violation. Prairieview-Ogden School District #197 is a very environmental friendly school district (a few examples: A geothermal system in and a 50kW Wind Turbine supplying electricity at one of our buildings, low flow toilets, a 1kW solar panel system at each of our three buildings, and either LED/T-8 lighting just to name a few).

I wrote to Senator Bennett back on May 3, 2017 (see attached); in which he read my letter at the hearing back in 2017. My interest in the VW mitigation funds relates directly to one of the eligible mitigation actions, which is the replacement of diesel-powered school buses with all-electric non-polluting buses. As you know, diesel buses emit NOx while running, a problem which is furthered by the fact that school buses idle while picking up and dropping off children furthering student exposure. (we have as young as 3 year olds riding the school bus). Children are most at-risk since they have underdeveloped lungs. Plus, students with asthma (most common chronic condition among one out of ten children) are triggered by pollutants like NOx emissions from diesel school buses.

The Prairieview-Ogden Community Consolidated School District #197 would be very interested in pursuing these funds. Besides the environmental benefits for students and school employees of zero emission buses, the District would reduce its operating costs by converting school buses to all-electric vehicles. These funds would really help because the State Transportation Budget has been pro-rated for years (72%) and this school year we have only received one FY18 payment from the Comptroller. Therefore, our small rural district bus fleet is getting older and older because we can’t afford to purchase new bus(es).

The Prairieview-Ogden District and other rural districts would benefit greatly from this program. These funds can protect the public health of our school children and save money for our taxpayers.

Every one of us know that you can’t put a price tag on student safety!

Sincerely,

Victor White

HOME OF THE MUSTANGS!
Senator Scott Bennett  
52nd Senate District  
45 E. University Avenue, Suite 206  
Champaign, IL 61820

Dear Senator Bennett;

I have been following with great interest the news about a new trust fund that will be providing significant dollars to the states for clean air improvement. The U.S. Department of Justice and Volkswagen recently entered into an environment mitigation trust agreement that will provide Illinois with more than 100 million for eligible environmental projects to offset the air pollution damage caused by VW’s pollution violation. As you know, PVO District is very environmental friendly with a geothermal system, a 50kW Wind Turbine, low flow toilets, three 1kW solar panel systems, and either LED/T-8 lighting just to name a few.

My interest in the VW mitigation funds relates directly to one of the eligible mitigation actions, which is the replacement of diesel-powered school buses with all-electric non-polluting buses. The Prairieview-Ogden Community Consolidated School District #197 would be very interested in pursuing these funds. Besides the environmental benefits for students and school employees of zero emission buses, the District would reduce its operating costs by converting to these all-electric vehicles. These funds would really help because the State Transportation Budget has been pro-rated for years (72%) and this year only one payment has been sent to districts throughout the State of Illinois Districts. Therefore, our small rural district bus fleet is getting older and older because we can’t buy new buses.

I understand that the State of Illinois will be required to prepare a plan for how it intends to spend the VW mitigation money. We would appreciate it if you could advocate for the state to commit a significant portion of the funds for school bus replacement. The Prairieview-Ogden District and other rural districts would benefit greatly from this program. These funds can protect the public health of our school children and save money for taxpayers.

Thanks for your continued interest in our schools and let me know if I may provide you additional information concerning our interest in electric school buses.

Sincerely,

Victor White

May 3, 2017
Mr. Frost-
Please see attached Pace Suburban Bus's comments on IEPA's Beneficiary Mitigation Plan.
We look forward to continued participation in this process.
Thank you.

Doug Sullivan
Department Manager, Marketing
Pace Suburban Bus
April 6, 2018

Mr. Brad Frost
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

Dear Mr. Frost:

On behalf of the Pace Board of Directors and our 120,000 daily riders, I appreciate the opportunity to comment on the Illinois Environmental Protection Agency (IEPA) Draft Beneficiary Mitigation Plan.

Pace, the Suburban Bus Division of the Regional Transportation Authority, is one of three transit agencies in northeastern Illinois. The six-county geographic territory we serve matches your designated Chicago nonattainment area for air quality. We provide nearly 40 million rides per year on bus, paratransit, and vanpool services. We operate more than 800 buses from 11 different bus garages in the suburbs, as well as 1500 additional vans and paratransit buses, constituting the fourth largest transit fleet in North America.

First, let me express my gratitude that IEPA in its Plan has recognized the air quality benefits that accrue from investments in public transit, as evidenced by the Plan specifically mentioning transit buses as a proposed recipient of funding. Not only are there benefits to air quality by converting diesel-powered buses to buses powered by a cleaner fuel, but the presence of more attractive buses (and bus service) contributes to the reduction of passenger miles of travel by private motorists when motorists choose to use transit instead of drive. Therefore, investments in public transit have an exponential impact on the reduction in pollutants sought by your Plan.

As to the substance of the Plan, Pace believes the proposed distribution of funding is too heavily skewed towards off-road projects. There are several reasons why on-road projects deserve a much larger share:

1. Investment in vehicles that operate completely within a nonattainment zone will offer greater air quality benefits than investment in vehicles who may travel outside the zone. For instance, a bus operated by a local public transit agency in a nonattainment zone does not leave that nonattainment zone, while a locomotive operated by a private corporation might travel anywhere on the continent.

2. The air quality problem caused by non-compliant Volkswagens most directly impacted those residents of Illinois living and working in closest proximity to the State’s highways and major roadways. Therefore, the benefits of the air quality improvement should be
geographically focused on those same roadways, so vehicles that use those roadways should receive the benefit of pollution mitigation actions.

3. Air pollution mitigation investments in public transit vehicles, as stated above, have a multiplier effect on the State's air quality, because the presence of new transit vehicles encourages single-occupant vehicle drivers to choose transit instead of driving alone, which takes cars off the road and further reduces pollution.

The justification for providing a larger share to on-road projects vs. off-road is borne out by the fact that other midwestern States have announced shares of 15-25% to off-road projects.

Given the ratio of Volkswagen vehicles registered in the Chicago nonattainment area vs. the East St. Louis nonattainment area, the Chicago region should be allocated at least 92.7% of the State's funding. Furthermore, if the Metro-East area is redesignated as an attainment area (as page 6 of the Plan states), the Chicago area should receive 100% of the funding. Projects in attainment areas should not be eligible for funding.

Pace supports the requirement for applicants to provide a cost share at the time of grant awards. However, Pace encourages that the "local share" to be provided by an applicant be defined so as to offer flexibility on whether federal or local funds can be used as the local share.

Pace looks forward to the opportunity to formally submit an application for funding once the State's grant program rules have been announced. Thank you for your consideration of our comments.

Sincerely,

T.J. Ross
Executive Director
Brad,

Thank you for calling me back this afternoon. Attached is a simple draft of our idea thus far. Also attached is an age distribution of owner/operator trucks contracted to C & K that represents the units we would target. If available to meet at 9:00 AM on Thursday, April 12, please reply with your address. Look forward to continuing the conversation.

Steve Flammersfeld
Vice President - Sales
TransChicago Truck Group

State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
Environmental Mitigation – Drayage Proposal

TransChicago Truck Group

Truck model

- Regional specification, day cab
- Safety; collision mitigation and lane guidance
- Extended powertrain and chassis warranties

Owner/operator & small fleet financing

- ENGS Commercial Finance Co.
- Operate in containment area

Donor truck, salvage, and disposal

- National Inspection Services and scrap values
- Destruction and salvage. Documentation.
- Model year, pre-2002/04, pre-2007 EPA emissions.
- Local high school vocational program truck donations

Pricing

- Factory volume incentives
- New model year 2020
- FET

Illinois Trucking Association membership

Membership in the ITA provides access to the latest in state and national trucking information, plus a growing list of services that can save you money and help you cope with the ever-changing and challenging complications of our industry. ITA strives to be an extension of your own staff; just a phone call away when that problem crops up in which you can’t find a solution. And if we don’t know the answer ... we’ll get it!

Teens, Trucks, and Traffic sponsorship, 501c3

Teaching high school aged drivers to safely share the roads with heavy trucks.

Prospects:

1. C&K Trucking LLC
2. Chicago Intermodal Transportation
3. Cushing Transportation
4. Custom Companies
5. Hub Group
6. Pacella Trucking
7. City Haul, Inc.
8. Large Cartage, Inc.
9. Reload Transportation Services, Inc.
10. Top Logistics, LLC
11. Focus Trucking, Inc.
12. Harbor Bridge Intermodal, Inc.
13. Schmidt Cartage
14. Reliable Transportation Specialist, Inc.
15. Evans Delivery
16. Reliable Cartage, Inc.
Hi,

I believe there needs to be a greater emphasis on using the funds for electric vehicle charging stations. This would directly impact the taxpayers, as they can see the benefit, and also have the potential to have the greatest impact in reducing emissions, because it would motivate people to buy electric vehicles. Right now, I believe the greatest impediment to purchasing electric vehicles is the fear of not having enough charging stations. Please increase the funds towards creating more electric vehicle charging stations.

Thank you,

Nitin

--
Nitin Sharpe
Hi Kim,

I am responding to a news story which appeared today on WGN TV Chicago regarding Illinois looking for Ideas about 108 million settlement from Volkswagen. I have several ideas that center around the Illinois highways rest area's,

One idea is to put in electric car fast charging stations at all rest stops along Illinois highways. Fast charging stations can charge a car 80% in 20 minutes. Many people would be more willing to purchase electric cars if these charging stations were available. Currently today when leaving a metropolitan area these stations are not readily available and thus a deterrent to purchase these green energy vehicles.

Of course new road signage would be needed and a marketing campaign alerting the public to the availability of these charging stations.

The last two ideas are to install solar panels and smaller wind turbines (such as the Darrieus wind turbine) at these same facilities to make them self sustainable.

Kim if this was sent to you in error could you forward to the correct department.

Thank you,

Rich Galmines
Brad,

Nice meeting you last week at the Metropolitan Mayors Caucus meeting in Palos Hills. As you may recall Advanced VTech is full service auto and truck maintenance business with specific expertise in alternative fuel vehicles. Our carbon reduction product offering spans all sizes of vehicles, concentration on class 6 and lower vehicles. We install service and design fuel systems for propane natural gas (CNG & LNG), bio diesel, and electronic and hydraulic energy recapture. A company brief is attached with additional details.

You mentioned that it may be helpful to the IEPA’s development of the VW mitigation plan to lean more about the costs associated with alternative fuel vehicle implementation programs. We would be happy to assist in this area and do have lots of information on the costs and paybacks of alternative fuel systems and overall programs. You are welcome to visit our facility anytime where we could show you some alternative fueled vehicles and some of the components involved in their function.

Also, I wanted to confirm with you that under the VW program, grants will be for the full cost of the replacement vehicle and not just for the incremental cost of the alternative fuel system. For example, assuming:

- new diesel school bus costs $250,000
- new electric school bus costs $600,000
- new CNG or propane school bus costs $300,000
- For a school district the VW grant will cover 75% of the cost.

In these scenarios, a school district, with an approved VW program grant, would pay either $600,000 or $300,000 (Electric or CNG/Propane) for a new bus. They would retire an old bus and get back either $450,000 or $225,000 respectively. Also, they could get back 75% of the cost of a charging substation for the electric bus (but not a fueling station for propane or CNG).

This is my understanding from your explanation at the meeting, is this correct? Of course, we understand that all of this is subject to change with the final program, but just want to make sure current assumptions are clear. This is because under the current Green Fleets CMAQ grants, the eligible payouts would have only been for the incremental cost of the alternative fuel system, covered at a maximum of 50%, capped at $10,000 and only applicable to the incremental cost of the alternative fuel system over the traditional system. Also, under the current CMAQ grants, an older vehicle does not have to be retired to qualify.

Thanks again for your efforts. Please let us know your thoughts on the example above. Again, you or any of your staff are most welcome to visit our facility to find out more about alternative fuels technology.

Sincerely,
Company Brief

- A full service fleet and automotive maintenance and repair business
- Focused on bringing the benefits of alternative fuels - natural gas, propane, biodiesel - to businesses and municipalities
- Co-Owners/Management: David Hagopian and Ronald Sheble — extensive experience with alternative fuel vehicles
- Randy Johnson and Ed DeFurgalski — Our lead technicians, with 50+ combined years of vehicle experience - cars, trucks, buses - all makes, all models

Philosophy:
- Pledge to operate with the utmost integrity
- We will only repair what is broken and advise on future maintenance
- We service all makes and models of foreign or domestic cars and trucks
- Technicians also have ASE Compressed Natural Gas Vehicle (F1) certifications
- We focus on preventive maintenance to keep our customers' fleets productive

Alternative Fueling:
- We offer EPA certified systems that enable fleet vehicles to burn natural gas, propane, or biodiesel while still retaining the ability to burn the original fuel - gasoline or diesel - thus a bi-fuel or dual-fuel system
- We also offer dedicated natural gas and propane systems that burn only natural gas or propane to customers where 100% reliance on that fuel is practical - yields greatest and quickest return on investment
- Increasing number of CNG stations offer convenient re-fueling options in Chicagoland and across the country
- Many businesses installing private CNG compression systems - additional investment with reasonable payback
- Propane suppliers are eager to provide on-site fueling, no upfront cost, fee built into fuel contracts

Alternative Fuel Conversion Facts:
- Proven off-the-shelf technology — over 18 million natural gas fueled vehicles operating around the world; over 16 million propane fueled vehicles operating around the world
- Significant cost savings achieved by fueling with alternative fuels — usually about a 2 year simple payback
- Grant programs and other initiatives available — contact us for more information
- Go Green — 20% to 40% reduced carbon emissions by converted vehicles
- Reduced wear on the engine and other key components due to natural gas and propane being a cleaner fuels
- CNG / LNG / LPG fuel and tanks are stronger and safer than gasoline fuel and tanks; multiple safety valves

Alternative Installations:
- Certified installers of and/or service for systems offered by AGA Systems, Alliance Autogas (Prins), Altech-Eco, BayTech, Clean Air Power, Clean Fuel USA, ICOM, Landi Renzo USA, Omnitek Engineering, Optimus Technologies, Stag USA, & Westport
- We offer EPA certified solutions for many diesel engines — Caterpillar, Cummins, Detroit Diesel, Mack, and Volvo — more options coming on-line all the time; all with strong economic payback
- We offer EPA certified diesel-to-natural gas engine conversion systems (DNG) with strong economic payback
- We offer EPA certified systems for GM, Ford, and Isuzu covering trucks, SUVs, vans, mini-vans, and some sedans
- 3-year or 36,000 mile DOT required inspections performed by co-owner David Hagopian - CSA Certified CNG Fuel System Inspector (certificate # U816A)
- Experienced installer of liquid natural gas (LNG) fuel systems

Associations:
- Relationships with Alternative Fuel Solutions, AmeriGas, Clean Energy, NGL Energy Partners - offer alternative fueling system solutions for businesses and municipalities to fuel their fleets in-house with compelling economic benefits
- Financing of system conversions and/or in-house fueling via our partnership with Fifth-Third Bank
- Member TECHNET Vehicle Service Program - 36 month / 36,000 mile nationwide warranty on consumer repairs
- Member Wheels, Inc. Maintenance Assistance Program Advantage Network (Wheels MAP)
- Authorized ARI Fleet Service Supplier
- Enterprise Fleet Management and Element Services service center
- Accredited by Better Business Bureau (BBB) — A+ rating
- Member Chicago Area Clean Cities Coalition (CACC) - Wisconsin Clean Cities (WICC) - South Shore Clean Cities (SSCC)
April 10, 2018

Illinois Volkswagen Mitigation Trust

Illinois Environmental Protection Agency
Delivered electronically to: EPA.VWSettlement@illinois.gov

Subject: Public Comment to Illinois Draft Beneficiary Mitigation Plan -- Volkswagen Environmental Mitigation Trust Agreement

Thank you for the opportunity to respond to this request for information regarding Illinois’s Draft VW Beneficiary Mitigation Plan (BMP).

The Illinois Petroleum Council (IPC) is a state affiliate office of the American Petroleum Institute (API). The API is a national trade association representing more than 625 member companies involved in all aspects of the oil and natural gas industry. API’s members include producers, refiners, suppliers, retailers, pipeline operators, and marine transporters, as well as service and supply companies and contractors that support all segments of the industry. The API and its members, including those in Illinois, are dedicated to protecting the environment while economically developing and supplying energy resources for consumers.

Illinois rightfully states in the draft BMP that one of its goals is to “maximize emission reductions” and intends to prioritize projects that “yield the largest amount of NOx emission reductions.” 1 IPC supports this goal. IPC supports funding projects that are the most cost-effective and that yield the largest amount of NOx emission reductions. With the Mitigation Trust funds, Illinois has the opportunity to reduce NOx emissions by replacing eligible engines and vehicles with newer model diesel engines that make full use of ultra-low sulfur diesel (ULSD). When ULSD was introduced, tests completed by the U.S. EPA, the California Air Resources Board, engine manufacturers and others showed that using the advanced emissions control devices enabled by ULSD fuel could reduce emissions of hydrocarbons and oxides of nitrogen (precursors of ozone), as well as particulate matter to near-zero levels. A recent DOT study, 2 using EPA emissions modeling, found that, next to vehicle idle reduction strategies, projects involving heavy-duty vehicle engine replacements had the strongest estimated cost effectiveness for NOx reduction (~$20,000 per ton NOx reduced). Conversely, electric vehicle charging infrastructure was one of the project types with the weakest cost effectiveness ($1.5MM per ton NOx reduced). Approximately two-thirds of the heavy-duty engines in Illinois do not have the latest engine technology. 3

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1 P.10, http://www.epa.illinois.gov/Assets/iepa/air-quality/vw-settlement/Draft%20BMP.pdf
2 Figure 3. Median Cost-Effectiveness Estimates, “CONGESTION MITIGATION AND AIR QUALITY (CMAQ) IMPROVEMENT PROGRAM, Cost-Effectiveness Tables Development and Methodology” Volpe National Transportation Systems Center, U.S. DOT, December 3, 2015
3 Diesel Technology Forum, https://www.dieselforum.org/illinois
Part of the VW settlement includes a $2B investment over 10 years for ZEV infrastructure and awareness and education programs. Another part of the settlement includes $2.9 billion [allocated to each individual state] that is intended to fund environmental mitigation projects that reduce NOx emissions. Of this up to 15% can be used to support light duty ZEV infrastructure.\(^4\) For Illinois, this means that a maximum amount of about $16.2 million dollars could be used for projects that support ZEVs. To that end, Illinois proposes to “fund electric charging infrastructure within individual [eligible mitigation actions] where charging infrastructure is needed.”\(^5\) The draft BMP proposes to maximize the NOx reductions by funding ZEV and charging equipment within each of three project types: 1) on-road projects; 2) all-electric school bus projects; 3) non-road projects. Section F of the BMP\(^6\) and the IEPA website\(^7\) calculates the emission reductions for the on-road and non-road projects. The estimated cost to reduce 1-ton of NOx for On-Road project is about $326,000 while the cost to reduce the same amount for the Non-Road project is about $42,000. No such calculation is shown in either the BMP or on the website that indicates the cost per ton for the All-Electric Bus project nor does it account for the additional cost of the ZEV infrastructure within the other two projects. (See attached Figures). As stated earlier, the ZEV infrastructure projects appears to be the least cost effective of those included in the options provided in the VW Settlement when determining emission reductions and are inconsistent with Illinois’s goal of reducing the most NOx emissions for the most people.

The draft BMP states that priority areas were based on some of the “the following considerations...: counties designated nonattainment for ozone; and areas that bear a disproportionate share of the air pollution burden...” The Chicago ozone nonattainment area, comprised of Cook County and the “collar counties,” may soon require additional emission controls. Furthermore, Chicago metropolitan area air quality may be affected by emissions from the engines of marine vessels (ferries, tugs, and shorepower equipment for large ships) on Lake Michigan, switcher locomotives and heavy-duty diesel trucks. By giving highest priority to projects in the Chicago nonattainment area that repower or replace these engines with modern ones that operate on ULSD fuel or natural gas, Illinois could achieve large NOx emission reductions and most effectively improve air quality for its citizens.

Thank you for your attention, and for your consideration of our comments. If you have any questions, please don’t hesitate to contact me at watsonj@api.org or (217) 544-7404.

Sincerely,

James Watson, Executive Director
Illinois Petroleum Council

\(^4\) P. 9, “Light Duty Zero Emission Vehicle Supply Equipment. Each Beneficiary may use up to fifteen percent (15%) of its allocation of Trust Funds on the costs necessary for, and directly connected to, the acquisition, installation, operation and maintenance of new light duty zero emission vehicle supply equipment for projects as specified below...APPENDIX D-2 Eligible Mitigation Actions and Mitigation Action Expenditures, https://www.epa.gov/sites/production/files/2017-10/documents/statebeneficiaries.pdf


\(^6\) P.23, Ibid

\(^7\) http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index#mitigationTrust
Figures from “Goals, Priorities and Expected Benefits,” at http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index#mitigationTrust

Green indicates the amount of NOx reductions that are expected for the amount of money being spent. Red indicates the amount of money proposed to be spent by project type.

Estimated Cost to Reduce 1 Ton of NOx
To Whom it May Concern:

A copy of the correspondence below is provided on IRTBA letterhead, with signature, as an attachment to this email.

Alec Messina, Director  
Illinois Environmental Protection Agency  
EPA.VWSettlement@illinois.gov

Re: Volkswagen Settlement

Dear Mr. Messina:

On behalf of the Illinois Road and Transportation Builders Association, I am writing pursuant to the IEPA’s request for public comment regarding funds allocated to Illinois from the Volkswagen Environmental Mitigation Trust. In the 2016 General Election, Illinois voters overwhelmingly elected to add the Safe Roads Amendment to the Illinois Constitution: nearly 80 percent of voters approved the amendment. The Safe Roads Amendment states, in part: “No moneys . . . related to . . . fuels used for propelling vehicles . . . shall be expended for purposes other than [transportation purposes],” including “costs for construction, reconstruction, maintenance, repair, and betterment of highways, roads, streets, bridges, mass transit, intercity rail, ports, airports, or other forms of transportation.” Ill. Const. Art. IX, § 11. The approval of the amendment shows that the people of Illinois want the State to invest in transportation improvements.

We believe the Volkswagen settlement funds fall squarely within the Safe Roads Amendment’s mandate, and we therefore believe the settlement funds may be used only for the transportation purposes set forth in the Safe Roads Amendment. Using the settlement funds for these purposes presents Illinois with a great opportunity to make its transportation systems more ecologically friendly and environmentally sound.

Sincerely,

Michael J. Sturino

Mike Sturino  
President & CEO  
Illinois Road & Transportation Builders Association
This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient or the person responsible for delivering the e-mail to the intended recipient, be advised that you have received this e-mail in error and that any use, dissemination, forwarding, acting in reliance upon, printing or copying this e-mail is strictly prohibited. You are further notified to delete this message and all copies and backups thereof.

⚠️ Please consider the environment before printing this email.
April 10, 2018

Alec Messina
Director
Illinois Environmental Protection Agency
EPA.VWSettlement@illinois.gov

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Sincerely,

Michael J. Sturino
President & CEO
RE: Comments Relating to Draft BMP VW Settlement

As a long tenured municipal fleet manager it is my opinion that the greatest impact in nitrogen oxide reduction short term in my fleet would be the removal of non-emission controlled, and exhaust gas recirculation controlled Diesel engine equipped vehicles.

Class six, seven, and eight trucks in municipal service normally are long life units with life spans reaching fifteen plus years. The bulk of their use are in high load situations, snow removal, hauling, and deicing applications, under heavy loads these older Diesels non-controlled and EGR controlled emit their highest levels of emissions.

Giving municipals the ability to replace older diesels with new technology Diesel units will provide an instant reduction in emission and give the municipal fleet’s time to plan to move to other energy sources. The movement to gaseous fuels requires great infrastructure redesign. This stepping stone will give time needed to plan, fund, build or retrofit existing fleets and support infrastructure.

Additionally consideration should be given to new diesel technology recently purchased or in the process of being purchased to replace older Diesels for incremental reimbursement or full replacement cost based on the vehicles use.

Thank you for consideration of these comments.
I feel the settlement funds would be well spent on a connection of the Centennial Trail to the Salt Creek Trail. There is a major gap in the bike path system here in the historically underserved southwest side.

Bike Trails benefit us all and celebrating the Portage site with connection of these trails is long overdue.

Rob Dixon
Board Member, Olmsted Society
Good day Mr. Frost,

My input for the use of the funds is to REPAIR our STREETS and ROADS.

I have lived in other countries and many other states and since my relocation to Decatur Illinois in July 2017 am completely shocked at the conditions of streets.

I have seen some severe tire blowouts due to incredibly horrific potholes. These streets and roads are a complete hazard to vehicles and lives.

Thank you,

Megan Roberts

Sent from Yahoo Mail on Android
Ladies and Gentlemen:

I am making this proposal after learning of the Dieselgate settlement via Tribune/WGN-TV.

I propose that THREE Alternative Fuel Depots be set up in Chicago Proper in the following areas:

1. 119th-120th and Morgan Streets-just west of the Metra Electric West Pullman Station with bus shuttles to the Metra Electric and Rock Island stations
2. The site of the old Pheoll Manufacturing or Aldens catalog houses
3. The Edgebrook area around Caldwell and Devon or the site of the old Sears Six Corners

Each site would serve to provide ALTERNATIVE FUELS for Alternative Fuel powered vehicles including: NAT-GAS; E-95; E-85; Propane; Biodiesel; Hydrogen; E-15; Ethanol; Methanol based fuels; as well as charging stations for Dedicated Battery/Electric Vehicles. An anchor store, such as a Meijer, a Target, or even an AMAZON Pick-Up Outlet store could also be part of the plan!

Jon Keith Evans
There is talk of taxing residents because of money needed to repair our roads in Illinois. What a better place for this settlement than our roads?
From: john fenelon <john.fenelon@example.com>
Sent: Wednesday, April 11, 2018 3:59 PM
To: EPA.VWSettlement
Subject: [External] 108 million

Open more car testing sites and once again allow independent testing sites. Long lines distance traveled and time wasted is adding to any pollution!

John Fenelon
Dear IL EPA VW settlement,

Please reconsider the use of these funds to get us moving with zero emissions vehicles, and invest the full 15% for EV charging infrastructure. Help to usher in a cleaner near future for Illinoisans.

Sincerely,

Leah Ostrar, Illinoisan Taxpayer

The draft Volkswagen mitigation plan released for Illinois has some positive elements -- it recognizes environmental justice concerns, and it commits 10% of funds to be invested in electric school bus programs, which is an important step to protecting children across our state.

But the only way to accelerate toward a clean vehicle future is for Illinois to choose zero emission vehicles -- and we must be ready for them. In addition to prioritizing electric transportation, Illinois' final mitigation plan should invest the max 15% of funds in charging infrastructure. Ohio, Michigan, and Minnesota have proposed dedicating the full 15% for EV infrastructure, so Illinois shouldn't be left behind.

None of the funds should go to advance dirty engines that run on diesel and natural gas, the same fossil fuels that got us into this mess. Instead, plans should prioritize electrification through retrofitting or replacing polluting vehicles with clean, zero emission trucks, transit buses, locomotives and freight switchers, along with investing the full 15% for EV charging infrastructure.

Sincerely,

Leah Ostrar
8041 Kedvale Ave

This message was sent by KnowWho, as a service provider only, on behalf of the individual noted in the sender information.
Good letter Mike

From: Michael Sturino  
Sent: Tuesday, April 10, 2018 1:55 PM  
To: EPA.VWSettlement@illinois.gov  
Cc: Mark Barkowski, Julie Chamberlain, Dave Rock, John Kapovich, Pete Mesha, Annette Fecarotta  
Subject: IRTBA Comment - IEPA VW Settlement

To Whom it May Concern:

A copy of the correspondence below is provided on IRTBA letterhead, with signature, as an attachment to this email.

Alec Messina, Director  
Illinois Environmental Protection Agency  
EPA.VWSettlement@illinois.gov

Re: Volkswagen Settlement

Dear Mr. Messina:

On behalf of the Illinois Road and Transportation Builders Association, I am writing pursuant to the IEPA’s request for public comment regarding funds allocated to Illinois from the Volkswagen Environmental Mitigation Trust. In the 2016 General Election, Illinois voters overwhelmingly elected to add the Safe Roads Amendment to the Illinois Constitution: nearly 80 percent of voters approved the amendment. The Safe Roads Amendment states, in part: “No moneys . . . related to . . . fuels used for propelling vehicles . . . shall be expended for purposes other than [transportation purposes],” including “costs for construction, reconstruction, maintenance, repair, and betterment of highways, roads, streets, bridges, mass transit, intercity rail, ports, airports, or other forms of transportation.” Ill. Const. Art. IX, § 11. The approval of the amendment shows that the people of Illinois want the State to invest in transportation improvements.

We believe the Volkswagen settlement funds fall squarely within the Safe Roads Amendment’s mandate, and we therefore believe the settlement funds may be used only for the transportation purposes set forth in the Safe Roads Amendment. Using the settlement funds for these purposes presents Illinois with a great opportunity to make its transportation systems more ecologically friendly and environmentally sound.

Sincerely,

Michael J. Sturino
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Please consider the environment before printing this e-mail.
Dear Mr. Frost:

Please find attached comments from Airlines for America on the State’s draft beneficiary mitigation plan under the Volkswagen Environmental Mitigation Trust agreement. Please let me know if you have any questions or would like to discuss our comments in greater detail. Thank you.

Best,
Veronica

Veronica C.K. Bradley
Manager, Environmental Affairs
Airlines for America
We Connect the World

airlines.org | Facebook | Twitter | Instagram | LinkedIn
April 12, 2018

Submitted via email to epa.vwsettlement@illinois.gov

Brad Frost
Manager, Community Relations
1021 North Grand Ave. East
Springfield, IL 62794-9276

Re: Comments on the State of Illinois Draft Beneficiary Mitigation Plan under the Volkswagen Environmental Mitigation Trust Agreement

Dear Mr. Frost:

Airlines for America® ("A4A") would like to thank the Illinois Environmental Protection Agency ("IEPA") for the opportunity to comment on the State's use of the Volkswagen Consent Decree Environmental Mitigation Trust funds and urge the State to include projects that replace or repower airport ground support equipment with all-electric forms ("GSE projects") as an eligible mitigation action in its final Beneficiary Mitigation Plan.

A4A is the principal trade and service organization of the U.S. airline industry.1 A4A and its airline members have a strong record of advancing environmental goals, including actively supporting efforts to achieve and maintain clean air, while also driving economic growth. For example, emissions from the commercial aviation sector constitute less than two percent of domestic greenhouse gas emissions nationally and have had much slower growth from 1990 levels (5%) compared to the transportation sector overall (17%) and on-road sources in particular (24%).2 At the same time, our industry drives the national and state economies. In Illinois in 2012, civil aviation contributed nearly $51 billion in economic output, $16.7 billion of which was attributable to commercial airline operations alone. Civil aviation also supported over 366,000 jobs and contributed 4.2 percent to the state’s gross domestic product.3

U.S. airlines have achieved this level of simultaneous economic and environmental performance because we have relentlessly pursued and implemented technology, operational, and infrastructure measures to

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2 See U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014 (April 2016), Table A-115. Moreover, this lower rate of growth is from a much smaller base.
minimize our environmental impact. Among these measures, A4A member airlines have proactively worked with airports around the country to reduce emissions through cost-effective electrification of GSE. The United States and California have recognized the significant contribution GSE electrification can provide by naming it as an “Eligible Mitigation Action” that qualifies for funding from the Environmental Mitigation Trust (“Trust”) established under the Volkswagen Consent Decree.

A4A and its members are committed to further environmental progress and view the Trust as a unique opportunity to accelerate those efforts, particularly in disproportionately impacted communities. Our industry looks forward to working with IEPA and the State to optimize this opportunity, and offer these comments on the State’s draft plan.

* * * * *

GSE electrification is well positioned to provide the public health benefits envisioned by the Consent Decree as evidenced by close alignment of the benefits of GSE electrification with the overall goals outlined in the Draft Beneficiary Mitigation Plan (“Draft Plan”). The Draft Plan states its goals are to support projects that will: (1) “reduce [nitrogen oxide] NOx emissions in areas where the affected Volkswagen vehicles are registered while taking into consideration areas that bear a disproportionate share of the air pollution burden, including environmental justice areas;” (2) “maximize emission reductions; and” (3) “maximize and leverage funding.”4 GSE projects are highly effective at supporting these goals, and therefore, IEPA should include them as an eligible mitigation action in its final plan.

IEPA itself acknowledges the importance and effectiveness of funding off-road projects as shown by the substantial proposed investment in these types of projects under the Draft Plan. In a similar vein, GSE projects will provide cost-effective NOx emission reductions in areas IEPA has designated as priority areas. IEPA has identified Cook and DuPage counties as Priority 1 areas because they have the greatest number of affected VW vehicle registrations, they are designated as in nonattainment for ozone, and they bear a disproportionate share of the air pollution burden for the State. The two major airports in Illinois, Chicago O’Hare International and Chicago Midway International, are not only located in these counties but also are in close proximity to IEPA-identified environmental justice communities as shown in Figures 1 and 2 below. By funding GSE projects at these airports, IEPA will be able to realize emission benefits exclusively in these priority communities because GSE only operate on airport grounds, unlike other projects that may have more dispersed emissions benefits because the vehicles/equipment are more transient.

4 Draft Plan at 10.
Figure 1. Environmental Justice Communities Surrounding Chicago O'Hare International Airport\(^5\)

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In addition, IEPA has designated Winnebago County as a Priority 3 area based on the number of VW vehicles registered in the County. Winnebago County is home to Chicago Rockford International Airport, a major air freight hub. Again, as shown in Figure 3, by funding GSE projects at Chicago Rockford, IEPA will promote emissions benefits for the environmental justice communities in and around the airport.

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6 Id.
Based on the location of potential GSE projects in Illinois and the State's interest in improving these areas, IEPA should include GSE projects as an eligible mitigation action available to receive funding in the State’s final Beneficiary Mitigation Plan.

Importantly, GSE projects are also cost-effective, aligning their inclusion in the final Beneficiary Mitigation Plan with IEPA’s goals to maximize emission reductions and funding. Member airlines have unlocked state grant funds with cost-effectiveness thresholds in the past, and that experience readies them to propose equally cost-effective projects to make real differences in the local air quality surrounding airports in Illinois. An analysis conducted by the Utah Department of Environmental Quality shows that GSE projects are one of the most cost-effective eligible mitigation actions provided for under the Consent

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7 Id.
Decree (see Figure 4 below). Indeed, GSE projects are more cost-effective than several of the project categories Illinois has elected to include in its Draft Plan (e.g., on-road projects, school buses) and, therefore, merit inclusion in the final plan.\(^9\)

Figure 4. Eligible Mitigation Actions’ Cost-Per-Ton of NOx Emissions Reduced

Moreover, our member airlines recognize that as non-government entities they will have to share the capital costs of replacing airline-owned GSE with all-electric alternatives. To be sure, electric GSE cannot be deployed without supporting infrastructure such as onsite power distribution and sufficient point of use recharging equipment, which typically is owned and operated by airport operators. As such, airlines envision partnering with airport operators in integrated GSE electrification projects that will enable cost-effective investments in electric GSE. A4A therefore supports IEPA’s decision to fund electric charging infrastructure within individual eligible mitigation actions where charging infrastructure is needed. And, considering IEPA’s proposed cost share structure, these GSE projects will allow IEPA to better leverage its proposed funding mechanisms.

More specifically, our member airlines have expressed strong interest to repower or replace equipment in Illinois. They have identified over 360 pieces of equipment they would like to electrify at an estimated total cost of around $24.7 million. Implementing GSE projects at airports across the State will improve air quality for the Illinoisans working on airport grounds as well as those living in nearby communities, many of which are disadvantaged.

Considering GSE projects align well with IEPA’s overall goals for spending the Trust funds, A4A highly recommends IEPA reconsider and include projects that replace or repower airport ground support equipment with all-electric forms as an eligible mitigation action under the final Beneficiary Mitigation Plan.

Lastly, A4A also recommends that Illinois use non-competitive funding programs to disburse the Trust funds to the various categories of projects. GSE projects are a cost-effective, long-term solution to mitigate NOx emissions, but competitive grant processes are often prohibitively risky for GSE projects. Airline budgetary plans, which typically require concurrent planning with the airports that control overall infrastructure, require higher levels of certainty throughout the planning process than competitive grants can guarantee. This is because despite the funding opportunity the Trust provides, planning for wholly new GSE projects requires significant capital investment by the airlines, typically out of a normal fleet replacement and investment cycle. On the other hand, vouchers and rebates provide airlines the certainty

necessary to invest resources in planning for equipment acquisition and in coordinating with airports to secure associated infrastructure. Reducing risk and streamlining the disbursement of Trust funds are especially important for our members who intend to continue to promote emissions reductions across the nation through investment in GSE projects under the Trust.

*****

Thank you for your consideration. Please let us know if you have any questions regarding our comments, and we look forward to working with IEPA and the State moving forward.

Sincerely,

Veronica Bradley
Manager
Environmental Affairs
Airlines for America

CC: Ken W. Martin, Acting Deputy Director, Division of Aeronautics, Illinois Department of Transportation,
Arden Mills in Alton, IL would like to replace their current Tier 3 railcar mover with an all-electric Shuttlewagon. The current machine operates 1,000 hours annually. Total cost of a new all-electric freight switcher is 1.26MM including charging infrastructure.

Thanks,

--
Katherine Wurtz
Data Analyst | Partner
Dear Mr. Frost,

BYD appreciates the opportunity to submit the attached comments on Illinois’s Use of Volkswagen Settlement Funds.

Thanks,

Zachary S. Kahn  
Director of Government Relations — North America

BYD HEAVY INDUSTRIES  
www.byd.com
Submitted via email to EPA.VWSettlement@illinois.gov

April 12, 2018

Brad Frost
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794

Re: BYD Comments on Illinois's Use of Volkswagen Settlement Funds

Dear Mr. Frost,

BYD America ("BYD") appreciates the opportunity to submit the following comments that align with and build upon Illinois' history of success and future prioritization of achieving broad, multi-sector deployments of zero-emission vehicles and equipment. Such deployments will take advantage of this opportunity to reduce mobile source emissions and, in particular, provide near- and long-term nitrogen oxide (NOx) emissions reductions in those areas that bear a disproportionate share of the state’s air pollution burden.

BYD is a global company that is changing what is possible in zero-emission transportation. Our commitment to “solve the whole problem” has made BYD an industry pioneer and leader in not only the transportation sector, but also high-efficiency energy storage, solar power, LED lighting, and information technology. BYD and its shareholders, including Warren Buffett, see these environmentally and economically forward products as the way of the future.

Our North American headquarters and manufacturing facilities are located in Southern California. We are vertically integrated in order to better control the quality and costs throughout the manufacturing chain – we produce every major vehicle component, including our 100% recyclable batteries, inverters, and traction motors. This business structure ensures seamless communication and efficiency across components, which creates a better operational experience and competitive pricing.

Our recommendations for Illinois fall into three categories:

- Allocate funds into existing programs, building on the state’s history of success to leverage additional economic and energy benefits
- Concentrate funding for projects based on the largest sources of statewide NOx emissions
- Provide support for transformative technologies in areas disproportionately burdened with air pollution
BYD urges the Illinois Environmental Protection Agency to take these recommendations into consideration, which will enable Illinois to most efficiently and effectively make the most of its allocation of Volkswagen funds.

**Illinois Should Allocate Funds into Existing Programs, Building on Its History of Success to Leverage Additional Economic and Energy Benefits**

The $108.7 million allocated to Illinois is an opportunity for the state to continue to transform its transportation sector. Simply replacing existing diesel vehicles with new (but still conventional fuel) technology may yield limited benefits, but it will do very little in leading the state towards a cheaper, cleaner, and more reliable energy future with greater energy independence. Electric vehicles, however, offer the means to achieve energy security and environmental sustainability while simultaneously creating a driver for economic growth.

To that end, we appreciate that Illinois allocated 20% of its funds into on-road truck projects, but we recommend that this level be increased in order to align with its key state and environmental agency initiatives. The state’s Drive Clean Truck Program, for example, has successfully funded the deployment of Class 2 to Class 8 all-electric and hybrid trucks and buses throughout greater Chicagoland, leading to substantial air quality and environmental justice benefits.

Unfortunately, the program has not been able to fund new vehicles since July 2017. Furthermore, the current $3.2 million waitlist is indicative of the need for the state to allocate funds to this program. This program in particular demonstrates that there is already momentum in Illinois building towards fleet electrification because fleets see it as a vital near-term air quality investment and prudent long-term financial investment. By aligning the state’s VW Beneficiary Mitigation Plan with the growth opportunity presented by the Drive Clean Truck Program, the state will be able to accelerate market adoption of electric vehicles and make immediate and lasting public health impacts.

**Illinois Should Concentrate Funding for Projects Based on the Largest Sources of Statewide NOx Emissions**

As the figure below shows, on-road diesel vehicles and non-road diesel equipment (excluding locomotives and marine) should be the state’s primary focus for these funds as they account for 68% of the state’s NOx emissions from mobile diesel sources. The on-road sector is particularly important as 40% of the state’s mobile diesel NOx emissions come from this source. Illinois should thus ensure that its funds are allocated to address these emissions sources.

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NOx Emissions (2014)

<table>
<thead>
<tr>
<th>Category</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Road Diesel Vehicles</td>
<td>80,000</td>
</tr>
<tr>
<td>Non-Road Diesel Equipment</td>
<td>60,000</td>
</tr>
<tr>
<td>Locomotives</td>
<td>40,000</td>
</tr>
<tr>
<td>Comm. Marine Vessels</td>
<td>20,000</td>
</tr>
</tbody>
</table>

To do so, Illinois can target transit and shuttle buses as well as delivery, cab forward, and tractor trucks, many of which are “captive” fleets that operate almost entirely within dense communities or areas overburdened with air pollution and are thus capable of delivering immediate environmental benefits.

Allocating funds to cargo handling equipment will address non-road diesel equipment emissions. These pieces of equipment operate entirely within ports, rail yards, depots, and terminals — areas that Illinois has consistently addressed due to environmental justice concerns stemming from disproportionate air pollution impacts.

In particular, focusing funds on terminal tractors (also referred to as yard tractors, yard hostlers, or yard trucks,) presents Illinois with a viable solution to addressing non-road diesel emissions. Terminal tractors move freight quickly and efficiently through the state’s freight terminals; however, this productivity is at the cost of clean air because terminal tractors typically use older, high-emitting diesel engines. Illinois can therefore make an immediate and lasting impact on local air quality in these disproportionately burdened areas by electrifying these terminal tractors.

**Illinois Should Provide Support for Transformative Technologies in Areas Disproportionately Burdened with Air Pollution**

Illinois’s air quality issues have led to the designation of two ozone nonattainment areas in the state, which include eleven counties — Cook, DuPage, Grundy, Kane, Kendall, Lake, Madison, McHenry, Monroe, St. Clair, and Will — that are home to 8.96 million residents.\(^2\) Within these areas are Illinois’ leading population centers of Chicago, Aurora, Joliet, and Naperville. By directing funding to vehicles operating in these areas, Illinois can...

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immediately reduce harmful NOx emissions, thereby generating environmental, health, and economic benefits.

One such funding strategy is to electrify trucks and transit buses operating in Illinois’ population centers or along key corridors, such as I-55, I-80, I-90, and I-94. Electrified vehicle technologies produce zero emissions, eliminate the need for expensive-to-maintain particulate traps, and mitigate the need for oil changes. To combat non-road diesel emissions, Illinois can allocate funds to electrify the state’s cargo handling equipment projects.

**BYD Solutions**

Electrified on-road trucks, such as BYD’s various Class 5, 6, and 8 models, create additional benefits for the environment and operators alike, as shown in Table 1 below. Each of these models presents customers with a basic chassis readily available for customization. BYD works with top outfitters and upfitters to meet customer specifications; thus, each of our chassis can be outfitted into a dry box, flatbed, stake bed, refrigerated unit, refuse body, and bucket truck version.

### Table 1: What Sets BYD On-Road Trucks Apart

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Models&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Battery Performance</th>
<th>CO2 Reduced per Truck (tonnes)</th>
<th>Annual Fuel Savings</th>
<th>Annual Maintenance Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 5 Medium-Duty Truck</td>
<td>5D, 5F</td>
<td>155 mile range</td>
<td>340</td>
<td>$6,000</td>
<td>$4,000</td>
</tr>
<tr>
<td>Class 6 Medium-Duty Truck</td>
<td>6B, 6D, 6F, 6R</td>
<td>124 mile range</td>
<td>450</td>
<td>$8,200</td>
<td>$4,600</td>
</tr>
<tr>
<td>Class 8 Heavy-Duty Truck</td>
<td>8T, 8R, 8TS, and 8TT</td>
<td>92 mile range</td>
<td>636</td>
<td>$9,600</td>
<td>$4,500</td>
</tr>
</tbody>
</table>

As the world’s largest producer of battery electric buses, BYD has demonstrated experience and established customer delivery and deployment processes. Indeed, BYD has deployed more than 35,000 zero-emission buses internationally and has received orders for over 4,000 additional buses. These buses have accumulated hundreds of millions of miles of service, saved tens of million gallons of diesel, and reduced over a billion pounds of greenhouse gases (GHGs).

BYD’s product line of seven bus and coach models, ranging from 23’ coach buses to 60’ articulated transit buses and everything in between, are American Disabilities Act and Buy America-compliant. They can therefore help transit agencies in Illinois reduce fuel costs and minimize maintenance expenses, thereby increasing reliability and performance. Due to the increased miles put on transit buses, these vehicles see even more substantial

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maintenance and fuel savings than our trucks. BYD’s standard 40’ bus experiences yearly savings on the order of $45,000 per bus. Further, BYD’s recyclable battery technology enables these vehicles to operate 200 miles on a single charge, all while producing zero emissions.

BYD’s model 8Y terminal tractor is a 100% battery-electric class 8 truck that is capable of 15 hours of continuous operation between charges with minimal battery degradation. Each terminal tractor eliminates 1,590 metric tons of CO2 over its deployment lifetime. Related to the vehicle’s hugely beneficial total cost of ownership, the T8Y saves operators $19,100 in fuel costs and $8,800 in maintenance costs per truck each year – lower downtime, fewer moving parts, less wear and tear, and improved environmental efficiency are the hallmarks of BYD’s T8Y terminal tractor. Further, they are able to be deployed immediately as they are compliant with Federal Motor Vehicle Safety Standards (FMVSS).³

In the refuse and recycling market, BYD delivers all-electric Class 6 and Class 8 solutions. The BYD 6R provides 85 miles of range with minimal battery degradation and the BYD 8R’s 10-ton payload is capable of 76 miles of range. Owing to BYD’s breakthrough battery technology, each vehicle can reduce 450-700 metric tons of CO2 each year while saving operators $8,900 – $13,300 in annual fuel and maintenance savings.

Finally, where BYD’s technology exceeds the capabilities of our competitors is the design and capability of our AC chargers; specifically, our AC charging is all done on-board the vehicle. This on-board charging approach:

- Eliminates installation of large, expensive, hot DC charging stations with external converters, since that conversion is done internally;
- Virtually eliminates heat loss, so the charging system converts more of the current to motive energy;
- Virtually eliminates overheating, so charging can occur in all temperatures – in other words, there are no cold weather limitations on the technology;
- Eliminates the need for costly charger cooling systems;
- Virtually eliminates charger maintenance and increases charger durability, so there’s no need for replacement during the life of the vehicle or for many years after;
- Significantly diminishes electrical and heat hazards to staff; and
- Allows the chargers to be compact, easy to operate, easily installed with minimal space, engineering or permitting and even easily moved as needs change.

Closing Remarks

The commercial-scale heavy-duty electric transportation market is rapidly maturing, as demonstrated by the price reduction of more than 20% in our bus products over the last five years. This Volkswagen opportunity represents a unique chance to create immediate emission and economic benefits for Illinois’ residents, as well as build the groundwork for a sustainable electric transportation marketplace.

³ The T8Y is also compliant with Canadian Motor Vehicle Safety Standards (CMVSS).
BYD believes early-market incentive funding is critical to achieving more favorable upfront economics and that increasing sales will lead to cost-competitive purchase prices. We have committed to and successfully delivered substantial price reductions from our first generation of products. We hope to continue this progress in Illinois and support the state in addressing a broad spectrum of environmental issues, resiliency and sustainability chief among them.

BYD thanks Illinois for the opportunity to submit these recommendations. We would like to work with you and your team to ensure an efficient and effective rollout of the State of Illinois Mitigation Plan. Towards that end, we request an in-person meeting to discuss our recommendations further. We look forward to future collaboration that will help Illinois meet its environmental, fiscal, and social justice goals.

Sincerely,

Zachary S. Kahn
Director of Government Relations
BYD America
Good Day IEPA Friends,

Please find the attached comment form IDOT on your draft Beneficiary Mitigation Plan. If you have any questions please feel free to reach out to me.

Thank you,

Christopher D. Schmidt
Air Quality Manager
Illinois Department of Transportation

Please consider the environment before printing this email.

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Brad Forest  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276

RE: Draft VW Settlement Beneficiary Mitigation Plan Comment

Dear Mr. Forest,

Thank you for the opportunity to provide comments on the Illinois Environmental Protection Agency's (IEPA) draft VW Settlement Beneficiary Mitigation Plan.

Over the past month, department staff reviewed the IEPA outlined Beneficiary Mitigation Plan, and compared the proposed actions outlined to those found in peer state's draft mitigation plans. The actions described in the IEPA's draft plan aligns with the stated goal of leveraging the settlement award to best reduce NOx emission in the state of Illinois. We applaud IEPA for increasing the cost-share and utilizing 65% of the state's allocation toward non-road mobile sources. As stated in the draft plan, non-road mobile source emitters are a significantly higher portion of Illinois' polluters when looking at NOx. While the focus is on non-road mitigation action, the department is supportive of the diversity of mitigation actions outside of the non-road vehicles. It is our belief that the proposed all-electric school bus section and 20% portioned for on-road vehicles will provide for a diverse mix of projects.

The department also strongly supports IEPA's decision to prioritize mitigation efforts in Illinois' most vulnerable communities. IDOT supports the intention to prioritize mitigation efforts to areas with the largest population of affected VW vehicles, followed by areas which are designated as nonattainment areas in Illinois, and finally by areas which bear a disproportionate share of the air pollution burden, including environmental justice areas.

The draft mitigation plan, sets the stage for a data-driven, performance based application process. Performance based project evaluation aligns with the department's focus on ensuring taxpayer resources are invested transparently and will provide the greatest return on investment. To that end, we would like to offer our expertise and resources to you in implementing the call for projects.
Lastly, we have found our discussions on the program and draft VW
Settlement Beneficiary Mitigation Plan beneficial. We look forward to
continuing to be a resource for your agency during the continued
development of this opportunity. Please feel free to reach out to Chris
Schmidt with any questions and to continue our collaboration.

Sincerely,

Erin Aleman
Director
Office of Planning and Programming
Good afternoon,

Please find Proterra's comments attached.

Thank you,
April 13, 2018

Mr. Brad Frost
Illinois Environmental Protection Agency
epa.vwsettlement@illinois.gov

RE: Proterra Comments on Illinois’ Draft Beneficiary Mitigation Plan (“BMP”)

Proterra, the leading U.S. manufacturer of electric, zero-emission transit buses, appreciates the opportunity to provide comments on the draft BMP, which describes Illinois’ overall intentions and plan for spending ~ $108.6 million of Illinois’ VW allocation funding.

Proterra designs and manufactures the world’s most fuel-efficient battery electric bus and features on-route, fast-charge technology that offers functionally unlimited range, as well as an extended range version that enables transit agencies to travel 350 miles on a single charge. Proterra’s CATALYST™ bus achieves 22+ MPGe performance, 500%+ better than diesel and CNG buses, eliminating toxic diesel particulate matter and reducing carbon emissions by 70% or more compared to CNG or diesel buses. In addition, the cost of maintenance differential is substantial in comparison to fossil fueled buses. Using the APTA average of 36,000 miles per year and the FTA required 12-year life, a Proterra bus will save a transit agency over $200,000.00 per bus on average compared to a fossil fuel transit bus. Proterra’s buses have logged 4.5+ million miles of service in cities across the United States. With over 67 transit customers and over 546 buses on order, Proterra has become the zero-emission technology provider of choice for transit agencies nationwide.

And in October of 2017, the Chicago Transit Authority (CTA) issued a Request for Proposal for up to 45 heavy-duty battery-electric transit buses and up to 13 en-route charging stations. The funding for the CTA project will derive in part from a FTA Low or No Emission Bus Program grant awarded to CTA in 2016. [https://www.transit.dot.gov/funding/grants/fiscal-year-2016-low-or-no-emission-low-no-bus-program-projects](https://www.transit.dot.gov/funding/grants/fiscal-year-2016-low-or-no-emission-low-no-bus-program-projects).

Our mission is simple: to deliver clean, quiet transportation to all communities by replacing heavy-duty, fossil-fueled transit buses with zero-emission public transit buses. The harmful effects of vehicle exhaust from medium and heavy-duty trucks are on the rise and have been for years. The EPA reports that medium and heavy-duty vehicles account for 20% of GHG emissions and oil use in the United States’ transportation sector, but represent only 5% of the vehicles on the road. Similarly, GHG emissions from heavy duty vehicles across the globe are growing rapidly and are expected to surpass emissions from passenger vehicles by 2030. There is thus a strong need to not only mitigate past criteria pollutant emissions, but to continue to reduce toxic air pollutants in the medium and heavy-duty sector.

The Volkswagen settlement provides a much-needed opportunity to address this growing environmental concern and further demonstrate that commercially available zero-emission technologies have the lowest cost of ownership,
improved maintenance and performance, and better serve a diverse range of communities’ public transit needs, including the reduction of NOx and the elimination of GHG and criteria emissions.

The draft BMP appropriately prioritizes projects that reduce NOx emissions efficiently and cost-effectively. The plan makes clear the public importance of using the trust funds to (i) “maximize emission reductions,” and (ii) “maximize and leverage funding.”

Consistent with these sentiments, Proterra strongly supports funding for electric buses and charging infrastructure. But it urges the EPA to limit funding to battery electric, zero emission transit and school buses and to allocate up to 50% of the funding for On-Road Projects (an increase from the currently planned 20%). This would require a commensurate decrease in proposed funding for Off-Road Projects. We certainly agree with a statewide goal of expediting deployment and widespread adoption of zero emission vehicles and achieving significant reductions in diesel emission exposures in priority air quality areas and areas that receive a disproportionate amount of air pollution from diesel vehicles. The state can accomplish both by investing heavily in battery electric buses. Replacing diesel buses with electric buses is simply one of the best investments the state can make to help electrify public transit and improve air quality. We believe that the best way to accomplish these and other statewide goals is to use the funds from the VW trust to fund 110% of the incremental cost of a new electric bus and associated charging infrastructure.

The electrification of heavy duty vehicles offers a pathway towards achieving the numerous benefits associated with zero emission transit. Indeed, Park City, Utah’s recent deployment of Proterra electric transit buses is the poster child for why states should emphasize the electrification of transit buses with their VW mitigation funding. In June 2017, Park City Transit deployed six battery electric buses. Since that time, the electric fleet has traveled more than 160,000 miles using 269,400 of kWh electricity, resulting in an average fuel efficiency of 1.7 kWh/mile, or just over 22 MPG(e) for Park City’s diesel buses. The electric buses have displaced the use of ~ 32,000 gallons of diesel fuel in their first four months alone, while eliminating more than 801,000 lbs. of GHG emissions. Additionally, the electric buses have saved Park City Transit money through the savings in fuel and maintenance. In fact, the cost per mile of operation has dropped from a high of $0.63 a mile using diesel to a low of $0.30 using electricity. Not surprisingly, Park City has seen an increase in ridership on those routes utilizing zero emission buses, causing other municipalities to determine how they too can add and/or increase the number of zero emission buses on the road.

We propose that Illinois adopt two specific funding programs that have significantly accelerated the adoption of heavy duty EVs and, as a direct result, helped reduce NOx and GHG emissions. First, we urge Illinois to adopt the competitive funding programs in place in California and at the federal level. The CA Zero-Emission Truck and Bus Program is a competitive funding program that allows all manufacturers of zero-emission technology to partner with transit agencies and compete for project funding. It is very much modeled after the highly competitive Federal Transit Administration’s Low or No Emission Program, which has helped fund the purchase of zero-emission transit buses across the US. The CA program is important in that it allows newcomers to receive funding for not only buses, but also chargers (EVSE).

Additionally, we suggest that the state pay 110% of only the incremental costs of the buses and required charging infrastructure, much like the state of Colorado has proposed in its draft mitigation plan. This approach will help spur the adoption of a greater number of electric buses among transit agencies, airports and universities. See Exhibit A for a 30-bus project proposal.
Second, we request the EPA to adopt the successful voucher/incentive programs that are helping to accelerate the adoption of heavy-duty EV buses. California’s Hybrid & Zero-Emission Truck and Bus Voucher Incentive Program (HVIP) is a pool of money that is used by transit agencies on a first come, first served basis to bridge the gap between purchasing a fossil fuel vehicle and a zero-emission vehicle. For example, the transit bus OEM can receive a voucher for up to $160,000 per EV vehicle, which amount is then deducted from the cost of the bus. The Chicago Drive Clean Truck Voucher Program is a similar program and could easily be expanded to meet the zero-emission transportation needs of cities throughout the state of Illinois.  

http://drivecleanchicago.com/About/What.aspx; http://drivecleanchicago.com/CleanTruck/EligibleVehicles.aspx (identifying Proterra as an eligible vehicle). These programs have proven valuable in allowing agencies (and commercial properties) to grow their fleets of zero-emission buses.

Proterra encourages the EPA to promote the adoption of zero-emission technology, and not “near-zero” technology. Nationally, 7,461,458 tons of NOx, or 55% of the 13,489,110 tons of NOx emitted derive from mobile sources; 35% attributable to on-road sources. In the state of Illinois, 295,353 tons of NOx, or 60% of the 489,875 tons of NOx emitted are from mobile sources. On this basis alone, we urge the EPA to use up to 50% of its funds to advance the electrification of transit and school buses in those areas disproportionately impacted by the VW diesel vehicle emissions. By doing so, Illinois will help achieve its program goals, including the reduction of NOx, greenhouse gases and other pollutants.

Thank you for the opportunity to provide comments on the draft BMP. Please feel free to contact me directly about these comments or Proterra’s project proposal titled The Public Transit Electrification Project: Sustainable Mobility for Illinois. I can be reached at 864-214-2668 or emccarthy@proterra.com.

Sincerely,

Eric J. McCarthy
SVP, Government Relations, Public Policy and Legal Affairs
Proterra Inc.

1 https://www3.epa.gov/csp-bin/broker?polchoice=NOX& _debug=0& service=data& _program=dataprop.national.1.sas

2 https://www3.epa.gov/csp-bin/broker? _service=data& _debug=0& _program=dataprop.state.1.sas&pol=NOX&sfips=17

www.proterra.com
The Public Transit Electrification Project:  
Sustainable Mobility for Illinois

Project Application Information
Proterra Inc.
Eric J. McCarthy
Private Corporation (Non-Government)
1 Whitlee Court, Greenville, SC 29607
864-214-2668
emccarthy@proterra.com

PROJECT SUMMARY

Zero-emission public transit buses are ripe for immediate scaling and investment from the Environmental Mitigation Trust to help carry out the goals of Illinois’ mitigation plan to achieve significant and sustained reductions in diesel emissions and expedite deployment and widespread adoption of zero-emission vehicles. The Public Transit Electrification Project will initially deploy 30 zero-emission, battery-electric transit buses and 30 multi-use depot charging stations at one or more Illinois municipalities to provide electric mobility for all Illinois residents and serve as a strong spark to accelerate the deployment of ZEVs, reduce diesel emissions and eliminate toxic air pollutants. The size of the project, however, can easily scale to accommodate other interested transit agencies.

Proterra, the leading U.S. provider of zero-emission, all-electric transit solutions, designs and manufactures the world’s most fuel-efficient battery electric bus and features on-route, fast-charge technology that offers functionally unlimited range, as well as an extended range version that enables transit agencies to travel 350 miles on a single charge. Proterra’s CATALYST™ bus achieves 22+ MPGe performance, 500%+ better than diesel and CNG buses, eliminating toxic diesel particulate matter and reducing carbon emissions by 70% or more compared to CNG or diesel buses. To date, Proterra’s buses have logged 4.5+ million miles of service in cities across the United States. With over 67 transit customers and over 546 buses on order, Proterra has become the zero-emission technology provider of choice for transit agencies nationwide.

Proterra will manufacture and deploy the commercial zero-emission buses and depot charging stations and will work closely with the participating Illinois municipality or municipalities to successfully implement the Project. The Public Transit Electrification Project will demonstrate the economic and environmental benefits of accelerating the transition to commercially available ZEV technology, increase ZEV access and education, and eliminate toxic diesel exposures – achieving the goals of Illinois’ mitigation plan to improve and protect ambient air quality.
The Public Transit Electrification Project: Sustainable Mobility for Illinois

The goals of this Project are to:

- Reduce NOx emissions to improve air quality and provide health benefits.
- Launch a zero-emission public transit bus pilot project to demonstrate concepts of sustainable mobility in one or more municipalities.
- Increase zero-emission vehicle awareness and access.
- Accelerate scaled zero-emission vehicle deployment.
- Demonstrate the economic and environmental benefits of accelerating the transition to commercially available zero-emission technology to a large cluster of transit routes.
- Provide zero-emission buses to benefit those areas and vulnerable communities that bear a disproportionate share of the State’s air pollution burden, eliminating toxic emissions and providing zero-emission miles.
- Lead the transformation and technology transfer for a wide range of commercial fleets.
- Help drive down per-vehicle zero-emission bus costs with the Project’s scale.

The objectives of this Project are to:

- Deploy 30 zero-emission, battery-electric transit buses and 30 multi-use depot charging stations to show that commercially available battery electric transit buses better serve communities’ transit needs, substantially reduce greenhouse gas emissions, and provide substantial localized air quality benefits for disadvantaged communities.
- Reduce greenhouse gas emissions by up to ~ 3,336 metric tons CO₂e/year.
- Eliminate ~ 2.9 tons/year of weighted criteria pollutants and PM emissions.
- Provide scalable lessons learned to drive additional deployments of zero-emission heavy-duty technologies throughout Illinois.
- Deploy Proterra buses that charge using the J 1772 CCS standard.

PROJECT DETAIL

The Public Transit Electrification Project will deploy 30 zero-emission, battery-electric transit buses and 30 multi-use depot charging stations at the participating Illinois municipality or municipalities. To this end, Proterra is in discussions with some of the largest transit agencies in Illinois. These agencies are located in areas that receive a disproportionate quantity of air pollution from diesel fleets and from highway diesel NOx.

The VW settlement provides a much-needed opportunity to further demonstrate that commercially available zero-emission technologies have the lowest cost of ownership, improved maintenance and performance, and better serve a diverse range of communities’ public transit needs, including the reduction of diesel emissions and the elimination of criteria emissions.
The Public Transit Electrification Project: Sustainable Mobility for Illinois

Proterra - Technology Manufacturer and Project Coordinator

Proterra’s zero-emission, battery-electric technology is being deployed in revenue service throughout the nation. Transit agency early adopters, such as Foothill Transit and San Joaquin RTD in California, have demonstrated the technology readiness of Proterra’s battery all-electric solutions on urban as well as mixed suburban routes – and now major metropolitan agencies such as SEPTA (Philadelphia) and King County Metro (Seattle) are placing larger orders - 25 and 73 buses respectively. Nevertheless, there is a need for more deployments to demonstrate the economic, performance and lasting environmental benefits of deploying commercially available, cost-saving, zero-emission battery electric buses. The Public Transit Electrification Project will accelerate the deployment and adoption of commercially viable, immediately scalable zero-emission public transit buses in similar fleets throughout Illinois and beyond.

For the proposed project, Proterra will offer its extensive experience and expertise in manufacturing, deploying, operating, and maintaining commercial zero-emission buses and infrastructure – working closely with one or more participating transit agencies. To date, Proterra’s buses have logged 3+ million miles of service in cities across the United States. Proterra has zero-emission buses operating in revenue-generating service in the following cities: San Joaquin RTD in Stockton, CA, Foothill Transit in Pomona, CA, VIA Metropolitan in San Antonio, TX, University of Montana in Missoula, MT, WRTA in Worcester, MA, TARC in Louisville, KY, LexTran in Lexington, KY, Nashville MTA in Nashville, TN, PVTA in Springfield, MA, Star Metro in Tallahassee, FL, King County Metro, WA, RTC in Reno, NV, Jones Lang LaSalle in Chicago, IL, CATBus in Seneca, SC, Park City Transit, Park City, UT, Sportran in Shreveport, LA, DDOT in Washington, DC, MetroLINK in the Quad Cities, Illinois, DART in Dallas, TX and soon at MTA in New York, NY, and SEPTA in Philadelphia, PA.

The battery-electric buses and charging infrastructure for this project will be manufactured at Proterra’s manufacturing facility in Greenville, SC. The close proximity to the transit agency partner will ensure collaboration and ease of maintenance for any needed repairs to the vehicles and charging infrastructure during the 12-year vehicle lifespan.

Eligible Technologies to be Implemented

- Battery-Electric Bus: Proterra will replace Class 8, diesel heavy-duty transit buses at one or more transit agencies with 30 Proterra E2 battery-electric buses. Proterra is proposing its 40-foot Catalyst E2 battery-electric bus. The proposed Catalyst E2 bus has a total of 440kWh of on-board energy storage; more than 25% more capacity than other 40’ battery electric
The Public Transit Electrification Project: Sustainable Mobility for Illinois

buses on the market. Importantly, the Catalyst was designed from the start exclusively as an electric vehicle. It delivers remarkable route flexibility and has a stellar track record in operational performance. The bus body is made with advanced carbon composites that are extremely light, durable, and resistant to corrosion. The bus body is then paired with an advanced, scalable energy storage system and the most efficient drivetrain on the market. With its durability and corrosion resistance, this platform is designed to safely and to quietly withstand nearly two decades of service. The curb weight of the vehicle is 29,849 lbs. and the Gross Vehicle Weight is 39,050 lbs. The maximum speed is 65 mph (6000 RPM).

- Plug-In Charging System: Proterra is proposing 30 62.5 kWh depot chargers that can be combined to charge a Catalyst E2 440kWh bus from 0% to 100% State of Charge (SOC) in ~ four (4) hours.

Management/Implementation Capacities

Proterra will work directly and collaboratively with a municipality to ensure the successful planning, manufacturing, deployment, operation, and maintenance of the zero-emission public transit buses and charging infrastructure throughout the Project. Proterra will provide significant executive staff resources and a dedicated maintenance employee to ensure a successful deployment of zero-emission vehicles and charging infrastructure and proper training for all existing service and maintenance employees.

The Proterra team members have extensive backgrounds in project management, manufacturing, vehicle deployment, vehicle maintenance and operations, vehicle and infrastructure training, and permitting and other on-site operational needs. The Proterra team will ensure this project is on time and within budget.

Project Objectives and Work Plan

The Project will demonstrate that zero-emission technologies can achieve significant and sustained reductions in diesel emissions in areas that receive a disproportionate quantity of air pollution from diesel fleets - perfectly capturing one of the primary goals of Illinois’ mitigation plan. The Project will also help accelerate the deployment and increase the awareness of electric vehicles, as well as provide the opportunity for all state residents to ride in an electric vehicle. It will serve as a major component of a citywide ecosystem that increases awareness of the many options for zero-emission mobility. In turn, this Project will significantly accelerate the adoption of zero-emission vehicles that will reduce greenhouse gas emissions, eliminate criteria pollutants, and provide the opportunity for all residents to go electric today and realize the many associated health benefits.

The Project tasks are divided into four major phases that are necessary to prepare for and conduct the proposed Public Transit Electrification Project: 1 – Project Kick-Off, 2 – Production and Delivery, 3 – Entry into Service, and 4 – Reporting and Feedback. Each phase is described below and in further detail, including identifying the entity is performing each task.
The Public Transit Electrification Project: Sustainable Mobility for Illinois

Phase 1 – Project Kick-Off [9 months]
Phase 1 lays the foundation for the success of the Public Transit Electrification Project, which includes finalizing all necessary documents and agreements and attending the kick-off meeting and pre-production meetings with end-users.

Phase 2 – Production and Delivery [up to 12 months]
In Phase 2 the zero-emission buses are manufactured and delivered and the charging infrastructure are ordered, delivered, and installed. This includes the site design, permitting, production and installation of each charging station, as well as the status report of the vehicle production and delivery.

Phase 3 – Entry into Service [3 months]
In Phase 3, Proterra will initiate the customer launch process that ensures that the buses are effectively and efficiently received, inspected, accepted and deployed with confidence. About 6 weeks before the delivery of the first bus, Proterra initiates the launch process, which includes providing an overview of the vehicle, the end-user training, and coordination to ensure the end-user to ready for delivery and deployment of the vehicles into service.

Phase 4 – Reporting and Feedback [ongoing]
Throughout the Project, Proterra will provide quarterly status reports to the state and the transit agency. Each vehicle is equipped with an on-board data logger that provides data on bus performance and Proterra will ensure that all necessary data is compiled and reported to both entities.

Project Vehicles, Equipment and Service
Proterra will work directly with a transit agency to ensure a successful execution and completion of the project – including vehicle operation, charging, vehicle maintenance and repair, and data collection. Proterra has worked with multiple transit agencies across the United States. This vast experience will ensure successful implementation.

Proterra will install on-board data loggers in each vehicle to provide performance data on a quarterly basis. Data will include, but not be limited to: fuel/electricity consumption, fueling/charging times, state of charge, battery and odometer readings, relevant telematics, GPS data, hours of operation, temperatures, etc.

Proterra has developed extensive driver and maintenance technician training to ensure successful execution and completion of the proposed pilot project – including, but not limited to, training for vehicle operation, charging, vehicle maintenance and repair, and data collection. The training for both drivers and maintenance technicians includes classroom instruction and hands-on/in-the-seat training. The training will be performed at each end-user location with the appropriate materials available to the participants. The training includes tests that are administered after each classroom session and a certificate of completion after the participants have successfully finished the course. All drivers, maintenance technicians, and transit managers for this proposed project will receive classroom instruction and hands-on training. In addition, Proterra has created a series of "YouTube" style videos that provide an easy reference tool and more background on procedures – such as
docking the bus successfully, towing the bus safely, using the diagnostic tool, and high-voltage safety.

The Proterra battery-electric bus and charging infrastructure that will be used in the Public Transit Electrification Project is the Catalyst E2 extended-range, battery electric vehicle for use on all routes. The Catalyst E2 vehicle, which offers energy capacity of 440 kWh and a nominal range of ~ 250 miles per charge, uses a 62.5 kWh Plug-in Depot Charger that is commercially available with dual charging connectors. Proterra is the only EV bus manufacturer to invest in the standard SAE J1772 CCS for depot charging. This unique offering allows transit agencies to charge their fleet of light duty electric vehicles or offer public charging when the transit buses are not utilizing the chargers.

Using a sophisticated computer model, Proterra can analyze each transit route to ensure that the infrastructure and vehicles are designed and engineered to match the specific minimum charging needs of the 30-bus fleet. The inputs to the route simulation tool include: route distance, speed, stops, layovers, duration, and grade, as well as passenger loading, ambient temperature/HVAC loads, and other accessory devices that use power for the safe and efficient operation of the vehicles. This simulation provides information on charging station needs and location planning, route performance, gradeability and feasibility, fuel savings/cost of operation evaluation, route schedule, and harmful emission reduction calculations.

Proterra has extensive experience installing depot chargers, securing necessary permits with local entities, and addressing electrical needs and grid impacts throughout the country. Proterra will work directly with the end-user in the Public Transit Electrification Project and associated utility to ensure that the patriating municipality obtains all permits and approvals necessary for the infrastructure, as well as address any grid impacts or electrical needs at the charging location.

**Potential Emission Reduction Benefits/Expected Proposed Project Benefits**

At Proterra, we’re continually refining designs and looking for innovative ways to reduce impact on the environment. Proterra buses produce zero tailpipe emissions and decrease dependency on fossil fuels. Emissions are reduced by an astounding ~ 200,000 lbs. of CO2 annually each time a dirty diesel vehicle is replaced by a zero-emission bus. Particulate matter from traditional transit buses contains numerous harmful gases and upwards of 40 cancer-causing substances.

A typical diesel bus emits ~ 200,000 lbs. of greenhouse gases annually, while a CNG bus emits ~ 175,000 lbs./year and a diesel hybrid emits ~140,000 lbs./year. A switch to zero-emission buses, which emit no tailpipe pollution, presents a critical opportunity to cut pollution, reduce oil dependence and make Earth a better place.
The Public Transit Electrification Project: Sustainable Mobility for Illinois

Annual Tailpipe Emissions

<table>
<thead>
<tr>
<th>Emission (lbs/bus/yr)</th>
<th>Proterra</th>
<th>CNG</th>
<th>Hybrid</th>
<th>Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>0</td>
<td>1,822</td>
<td>20.59</td>
<td>41.18</td>
</tr>
<tr>
<td>CH4</td>
<td>0</td>
<td>792</td>
<td>4.11</td>
<td>4.03</td>
</tr>
<tr>
<td>CO2</td>
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<td>169,488</td>
<td>140,976</td>
<td>198,000</td>
</tr>
<tr>
<td>GHG (CO2e)</td>
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<td>190,080</td>
<td>141,083</td>
<td>198,105</td>
</tr>
<tr>
<td>NOX</td>
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<td>46.73</td>
<td>92.66</td>
<td>92.66</td>
</tr>
<tr>
<td>VOC</td>
<td>0</td>
<td>3.82</td>
<td>3.82</td>
<td>3.82</td>
</tr>
<tr>
<td>PM (2.5+10)</td>
<td>0</td>
<td>3.52</td>
<td>3.52</td>
<td>3.52</td>
</tr>
<tr>
<td>BC</td>
<td>0</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
</tbody>
</table>

https://greet.es.anl.gov/
Assumes 36k miles driven per bus per year.

The well-to-wheel GHG emissions avoided for 30 zero-emission transit buses is approximately 3,336 metric tons CO2e/year. Based on a conservative 12-year lifespan of the zero-emission, battery-electric buses – the project’s lifetime well-to-wheel GHG emissions avoided is up to 40,035 metric tons CO2e (for a 30-bus deployment).

All the vehicles in the proposed project are zero-emission battery-electric vehicles that do not have any tailpipe emissions; therefore, there are no additional NOx, ROG or PM10 emissions associated with the project. The total tailpipe emission reduction for 30 zero-emission transit buses is 1.26 tons NOx/year, 0.0519 tons of ROG/year and .0479 of PM10/year. Combined tailpipe weight emission reductions for criteria pollutants is 1.36 tons/year and 16.33 tons over the lifetime of the project. That reduction more than doubles when well-to-wheel criteria pollutants are considered, reducing ~3.0 tons/year and 34.76 tons over the lifetime of the project.

The estimated cost-effectiveness of the total project dollars per ton of combined criteria pollutant and weighted PM emissions reduced, and dollars per ton of GHG emissions reduced during a 12-year operation for all 30 vehicles are the following:

- Total Cost Effectiveness of GHG Emission Reductions
  - (Capital Recovery Factor x Project Cost)/Annual GHG Emission reductions
The Public Transit Electrification Project:  
Sustainable Mobility for Illinois

- \((0.095 \times \$24,100,000.00)/3,336\) metric tons of CO2e = $\$686.30$/metric tons of CO2e

- Total Cost Effectiveness of Criteria Pollutants\(^1\)
  - \((\text{Capital Recovery Factor} \times \text{Project Cost}) / \text{Annual criteria pollutant emissions reduction}\)
  - \((0.095 \times \$24,100,000.00)/1.26\) metric tons weighted criteria pollutants = $\$1,817,063.49$/metric tons of weighted criteria pollutants

Proterra used the Carl Moyer Program Guidelines for the cost calculations.  

Economic and Environmental Benefits

The Public Transit Electrification Project is both located within and provides direct economic and environmental benefits to one or more municipalities. The proposed project addresses common economic needs of communities, including increasing job readiness and career opportunities, improving transit service, and creating further quality jobs. Proterra will provide on-the-job training and certifications for driver and maintenance technicians to operate, maintain and repair zero-emission heavy-duty vehicles. This will increase job readiness and career opportunities in the growing electric vehicle market and further career opportunities. In addition, Proterra's state-of-the-art zero-emission public transit vehicles will eliminate toxic diesel and other criteria pollutant exposures to passengers - improving transit service within communities. The Project will increase quality jobs - including a dedicated Proterra employee to oversee the project, construction jobs to deploy the electric charging stations and other indirect jobs from vehicle component suppliers.

By combining performance, efficiency and design, Proterra's zero-emission, battery-electric transit buses offer the lowest total cost of ownership as compared to conventional diesel transit buses. Proterra's zero-emission transit buses operate with fewer moving parts - reducing maintenance costs associated with oils, filters, fluids, particulate filters, and brakes. In addition, electricity is much less expensive and less volatile than traditional diesel or other petroleum fuel - helping to reduce costs and provide more certainty for operating costs. Proterra's buses have significantly higher fuel efficiency, an average of 1.7 kWh/mile or 23.4 mpg equivalency, which also helps provide significant economic benefits for the participating municipality.

These operational advantages yield at least $135,000 savings in maintenance costs and $290,000 in fuel savings as compared to diesel fuel. Therefore, the economic benefits are over $400,000/bus in savings during the 12-year Federal Transit Agency (FTA) mandated lifetime of the vehicle for the transit agency or agencies participating in the Public Transit Electrification Project.

\(^1\) NOx is included in the criteria pollutants and comprises the majority of those pollutants.
The Public Transit Electrification Project: Sustainable Mobility for Illinois

Lastly, we estimate that, over 12 years of operation, the 30 Proterra buses will reduce ~ 3 million gallons of diesel fuel. On a per bus basis this equates to 100,000 gallons of diesel saved each year in typical transit operation (e.g., ~36,000 miles per year).

Estimated Project Cost

The estimated total project cost for 30 zero-emission, battery-electric transit buses and 30 multi-use depot charging stations is $24,100,000.2 Funding is needed now to further demonstrate that commercially available zero-emission technologies have the lowest cost of ownership, improved maintenance and performance, and better serve a diverse range of communities’ public transit needs, including the reduction of GHG and the elimination of criteria emissions.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Quantity</th>
<th>Subtotal</th>
<th>Taxes 0%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proterra Bus</td>
<td>$749,000.00</td>
<td>30</td>
<td>$22,470,000.00</td>
<td>0.00</td>
<td>$22,470,000.00</td>
</tr>
<tr>
<td>Depot Charger</td>
<td>$50,000.00</td>
<td>30</td>
<td>$1,500,000.00</td>
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<td>$1,500,000.00</td>
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<tr>
<td>Regional Service Representative and fringe benefits</td>
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<td>1</td>
<td>$130,000.00</td>
<td></td>
<td>$130,000.00</td>
</tr>
</tbody>
</table>

The above costs assume that the EPA would fund 100% of the purchase price of an all-electric bus and charger. However, the State could potentially double the number of buses funded as part of this proposed project if it uses the funds from the VW trust to fund 110% of the incremental cost of a new electric bus and associated charging infrastructure.

Increase ZEV Awareness and Education

To increase the exposure of the vehicles in the Public Transit Electrification Project, Proterra will develop project-specific webpages that will provide information on emission savings, vehicles deployed and funding sources to showcase the environmental and air quality benefits of the Project as a model deployment for other regions throughout Illinois and across the nation. Additionally, Proterra will work with the transit agency or agencies to customize bus wraps to include messages that highlight the zero-emission technology and acknowledging the funding sources for the successful deployment.

In addition, Proterra will work directly with any participating municipality and its transit agency to implement an outreach strategy to the community to help raise awareness and education about the health, air quality and other benefits of zero-emission technology. In conjunction with the end-users,

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2 This cost may vary slightly depending on the applicable tax rate, if any, and how the buses are configured and optioned by the participating transit agency. Finally, installation costs for the depot chargers are not included as they vary widely.
The Public Transit Electrification Project: Sustainable Mobility for Illinois

Proterra will launch a direct mail and email marketing campaign to generate awareness about the zero-emission transit bus technology in their communities. In addition, Proterra will provide a demonstration bus to circulate prior to the project deployment to help raise awareness and provide education about the vehicle technology. At the launch of service, Proterra will work with the local transit partner to execute a local public relations strategy – including press releases, media outreach and a launch event. Proterra will also offer an option to publicly display emissions savings and environmental benefits information on the transit agency’s website.

Other

In addition to the above, Proterra strongly recommends that Illinois direct 22% of the VW settlement funds to incentivize the deployment of zero emission, battery electric transit buses and medium duty vehicles to help reduce NOx and GHG emissions and vehicle miles traveled, as well as provide other health and associated benefits throughout Illinois. We also recommend that Illinois dedicate 15% towards EV charging infrastructure.

Beyond this specific project, we propose that Illinois adopt two specific funding programs that have significantly accelerated the adoption of heavy duty EVs and, as a direct result, helped reduce NOx and GHG emissions. First, we urge Illinois to adopt the competitive funding programs in place in CA and at the federal level. The CA Zero-Emission Truck and Bus Program is a competitive funding program that allows all manufacturers of zero-emission technology to partner with transit agencies and compete for project funding. It is very much modeled after the highly competitive Federal Transit Administration’s Low or No Emission Program, which has helped fund the purchase of zero-emission transit buses across the US. The CA program is important in that it allows newcomers to receive funding for not only buses, but also chargers. Second, California’s Hybrid & Zero-Emission Truck and Bus Voucher Incentive Program (HVIP) is a pool of money that is used by transit agencies on a first come, first served basis to bridge the gap between purchasing a fossil fuel vehicle and a zero-emission vehicle. For example, the transit bus OEM can receive a voucher for up to $160,000 per EV vehicle, which amount is then deducted from the cost of the bus. The Chicago Drive Clean Truck Voucher Program is a similar program and could easily be expanded to meet the zero-emission transportation needs of cities throughout the state of Illinois.

http://drivecleanchicago.com/About/What.aspx;
http://drivecleanchicago.com/CleanTruck/EligibleVehicles.aspx (identifying Proterra as an eligible vehicle). These programs have proven valuable in allowing agencies (and commercial properties) to grow their fleets of zero-emission buses.

Conclusion

The Public Transit Electrification Project will deploy 30 zero-emission, battery-electric transit buses and 30 multi-use depot charging stations at one or more municipalities to provide electric mobility and serve as a successful pilot project to accelerate the deployment of electric vehicles, reduce NOx emissions, improve air quality and provide health benefits. Proterra is excited to increase zero-emission vehicle awareness and eliminate toxic diesel exposures to both transit riders and non-transit riders throughout Illinois and beyond.
I would like to address a few things I feel should be looked at.

1. First of all we need more time to insure quality in the decision making.
2. There should be at least 4 public forums.
3. Is there going to be an overview committee?
4. Why is there 65% to off road use. I thought the goal was to take care of the most used pollution equipment or vehicle.
5. School buses should be propane. You can purchase a lot more buses with propane then electric.

I would appreciate if you would consider my proposals.

Thank You

Tom Thompson
Fleet Maintenance
Forest Preserve District of Cook County

fpdoc.com | facebook.com/fpdoc | twitter.com/fpdoc

“‘This message may contain confidential and/or proprietary information and is intended for the person/entity to whom it was originally addressed. Any use by others is strictly prohibited.’"
Thank you for the initiative to take old polluting Diesel engines off the road and replace them with efficient electric and clean air diesel.

Electric, propane and clean air vehicles are the future.

Gil Kerkbashian
Hi Illinois EPA,
I understand we are in the comment period for citizen input on how to use the VW Settlement Funds. I would like to express my support for using the funds to update vehicle fleets to lower emission and lower mileage vehicles, to address and reduce sources of air and water pollution and to build infrastructure that would lead to long term reductions in air and water pollution. I support using this money to bring long term solutions to environmental problems in our state. Thanks for listening,
Laurie Leibowitz

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Message

The draft Volkswagen mitigation plan released for Illinois has some positive elements -- it recognizes environmental justice concerns, and it commits 10% of funds to be invested in electric school bus programs, which is an important step to protecting children across our state. But the only way to accelerate toward a clean vehicle future is for Illinois to choose zero emission vehicles -- and we must be ready for them. In addition to prioritizing electric transportation, Illinois’ final mitigation plan should invest the max 15% of funds in charging infrastructure. Ohio, Michigan, and Minnesota have proposed dedicating the full 15% for EV infrastructure, so Illinois shouldn’t be left behind. None of the funds should go to advance dirty engines that run on diesel and natural gas, the same fossil fuels that got us into this mess. Instead, plans should prioritize electrification through retrofitting or replacing polluting vehicles with clean, zero emission trucks, transit buses, locomotives and freight switchers, along with investing the full 15% for EV charging infrastructure.

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To Whom It May Concern,

My name is Rachael Aguirre and I am the Transportation Coordinator for Mokena 159 in Will County. I have recently been informed about the VW Settlement and the opportunity to put in an inquiry about obtaining an electric school bus. Our District as of 2017 has 1556 students and 1093 are transported by school bus. Next year we expect to increase our ridership by 300 more students, which would also increase our fleet. It has been a large part of our campaign to reduce emissions in our small community and take any effort we can take to do so. Electric buses would be instrumental in the following areas:

- Reducing emissions
- Preserve our well established flora
- Reduce noise pollution with the diesel engines
- Lessen the fumes in the school bus interiors
- Lessen idling
- Lessen the fumes emitted at schools during pick up and drop off
- Eliminate the costly repairs required on diesel exhaust systems

I truly believe taking this proactive step and implementing environmentally friendly school buses now would save money and prevent costly clean up to our environment in the future.

Thank You,
Rachael Aguirre
Transportation
Mokena School District 159

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Dear Director, Illinois Environmental Protection Agency Alec Messina,

Please ensure that Illinois VW funds go to EV charging stations and electric school buses. I believe such allocation gives us the best return on investment and the greatest benefit to Illinois residents.

Regards,
Robert Kelter
Director Messina,

Attached is Clean Energy’s comments regarding Illinois’ draft mitigation plan. We greatly appreciate the opportunity to provide comments and look forward to the final plan. Please let me know if you have any questions or if I can be of any assistance.

Regards,

Brett Barry
Senior Policy Advisor

Clean Energy

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April 16, 2018

Alec Messina
Director
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276

RE: Comments Regarding Illinois’ Draft Mitigation Plan under the Volkswagen Settlement

Dear Director Messina:

Clean Energy, North America’s largest provider of natural gas motor fuel, applauds the agency’s draft mitigation plan. Specifically, we appreciate the inclusion of a cost sharing requirement for both public and private fleets. This approach will maximize the benefits of these one-time funds by leveraging additional capital. Additionally, the inclusion of AFLEET for the determination of emissions reductions is critical since it is one of the most up to date calculators. However, we would like to see limitations placed on grants for diesel engines much like what is being proposed in Colorado and for a greater percentage of the funds used for on-road projects.

In Colorado, grants for diesel vehicles may only be given to those who operate fleets of nine vehicles or less. This allows smaller fleets that may not be able to invest in cleaner alternative fuel vehicles to participate while at the same time requiring larger fleets to purchase vehicles which are cleaner than the status quo, namely diesel. Near-zero heavy-duty natural gas engines produce 90-95 percent fewer NOx emissions than a new diesel engine. Furthermore, if renewable natural gas (RNG) is used, carbon emissions can be reduced by more than 100 percent since RNG is largely sourced from land-fills and agri-waste by capturing what would otherwise be fugitive carbon emissions.

In regard to the allocation of 20 percent of the VW funds to on-road vehicles, Clean Energy believes this percentage needs to be increased for two main reasons:

1. Spending large amounts of VW funding on non-road projects does not maximize long-term impacts because it is not transformative. Targeting the money for less expensive on-road vehicles is transformative because it will impact larger numbers of new, cleaner vehicles and drive market acceptance of these vehicles helping to make them more commercially viable. Furthermore, non-road projects are not likely to support development of fueling infrastructure for use by other fleets and businesses.

2. Non-road projects do not necessarily address excess VW emissions where they occurred. VW Funds should be used to reduce emissions where the excess VW NOx
emissions occurred and that means along highways, on roadways, and in urban areas with high traffic density -- in some cases non-road projects may benefit these same areas but not in all cases.

Clean Energy greatly appreciates the opportunity to comment on Illinois’ draft mitigation plan. We respectfully request that our foregoing suggestions be considered for incorporation into the final version in order to maximize the air quality benefits that can be derived from this one-time opportunity.

Regards,

[Signature]

Brett Barry
The current BMP leaves out light duty electric vehicle charging infrastructure.

I understand the argument behind this -- that VW is, separately, providing support for similar infrastructure.

But I believe that the best strategy in the long-term for improving the air quality in Illinois is to engage in high-profile activities that will benefit from network effects of consumer awareness. The proposed changes (e.g., trains) may have an impact on air quality but these are in relatively arcane areas that will not be visible or inspirational to ordinary consumers. The benefits will not multiple.

Please invest in a highly visible EV charging infrastructure that through its use and popularity will solve the chicken and egg problems that contributes to lower EV adoption.

Finally, I think that basing the investment so strictly upon where the VW cars were sold seems silly. These cars get sold, people move. Air moves around.

Sincerely,

Stephen Baker
On behalf of Lake County Board Chair Aaron Lawlor and Lake County Board of Health President Tim Sashko, please find Lake County’s comments pertaining to IEPA’s Draft Mitigation Plan related to the VW Settlement.

Please contact me if I may be of any assistance.

Thank you.

Paul J. Fetherston  
County Administrator’s Office  
Assistant County Administrator  
www.lakecountyil.gov
April 16, 2018

Alec Messina, Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

RE: VW Settlement Beneficiary Mitigation Plan

Dear Director Messina:

The Illinois Environmental Protection Agency (IEPA) developed and distributed a draft Beneficiary Mitigation Plan (Plan) to address Illinois’ use of the Trust’s funds. With $108 million initially allocated from the Trust to the State of Illinois, we urge you to take the fullest advantage of this significant opportunity by funding projects intended to reduce emissions of nitrogen oxides across our communities.

Lake County – part of the priority one zone – supports a Plan that distributes Trust funds in a way that results in a meaningful reduction of emissions through an equitable system with stated objective criteria which prioritizes communities in non-attainment zones with the highest incidents of air pollution. In our respective capacities, we submit to you that the current draft Plan falls short.

Lake County supports a sustainable environment through its adopted Strategic Plan goal to "Preserve the health of our natural resources, air quality through the widespread use of environmentally sustainable management practices...". As a means to that end, the Strategic Plan identifies a strategy that leverages ‘existing tools and partnerships ... to change behaviors and practices.’ Since the draft Plan has not been developed openly and collaboratively in a manner that leverages partnerships, we believe the Plan requires additional time and public process.

The draft Plan requires additional work to develop buy-in, partnerships and strategies that effectively shift behaviors, practices and results in meaningful emissions reductions. As such, we ask that implementation of the draft Plan be deferred until a meaningful, transparent and accessible public input process occurs. In addition, we offer the following input on the further development of the Plan for the effective implementation of the Trust funds:

1. Design and implement a thorough public process that provides for meaningful input and dialogue and leverages existing tools and partnerships. Such a process should include public meetings across the state, including in Lake County.
2. Develop a Plan that includes a meaningful allocation of funding to support diversification of alternative fuel government fleets.
3. Ensure that the Plan articulates objective criteria that will lead to the funding of requests with the greatest emissions reduction affects. In order to appropriately evaluate changes in air quality in Lake County, it is also recommended that enhanced and relocated air quality monitoring equipment (e.g., PM2.5) be installed in a central Lake County location rather than only monitoring ozone at Illinois Beach State Park North unit.

As partners in the reduction of emissions in a manner that benefits our communities and State, we look forward to a collaborative and innovative process that results in the implementation of an effective Plan.

Regards,

Aaron Lawlor
Lake County Board Chair

Timothy Sashko
Lake County Board of Health President

Cc: The Honorable Bruce Rauner, Office of the Governor
Lake County Board
Lake County Board of Health
Afternoon,

I’ve been asked to forward the attached in response to the EPA’s request for public review and input on its draft BMP.

Won’t you please confirm receipt?

Thank you!

Sherry Kane  
Executive Associate  
Chicago Metropolitan Agency for Planning (CMAP)
April 17, 2018

Mr. Alec Messina, Director
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794

Dear Director Messina:

Thank you for the opportunity to comment on the state’s draft Beneficiary Mitigation Plan (BMP) that proposes how to allocate funding resulting from the settlement for Volkswagen’s emissions violations. CMAP has coordinated project selection for the federal Congestion Mitigation and Air Quality Improvement (CMAQ) program in northeastern Illinois for 25 years, giving the agency significant experience with and insight into emissions reduction.

Our comments have a substantive and a procedural component. On substance, a relatively large allocation to locomotive retrofits (proposed at 65 percent) is appropriate from our standpoint. In the CMAQ program, these projects tend to be the most cost-effective, much as the findings in the BMP. Illinois is unique in the amount of rail activity located here. Furthermore, we would urge you to prioritize retrofit or replacement of commuter rail locomotives and yard equipment. On top of having many older engines with no emission controls, Metra has significant state of good repair issues — mechanical failures resulting in passenger delay — caused partly by insufficient capital to pay for locomotive engine replacements.

We also appreciate the plan’s goal to reduce emissions in disadvantaged areas. This is very much in line with themes in our draft ON TO 2050 regional plan, which promotes a vision of inclusive growth that includes making special efforts to improve health outcomes in disadvantaged areas. In our own CMAQ project evaluation, we consider whether a project reduces emissions for particularly vulnerable populations. We also agree that the first priority for the use of VW settlement funds should be the Chicago non-attainment area, which has the majority of the VW ownership as well as disadvantaged populations.

Procedurally, it would be desirable to include more discussion in the plan about how priorities among project types were established. For example, while the goals of cost-effectiveness, environmental justice, and targeting projects to areas with high VW ownership all point toward rail projects in northeastern Illinois, it is less clear why electric school buses are a priority. An explicit goal to reduce...
Mr. Alec Messina  
April 17, 2018  
Page 2

Emissions exposure for particularly vulnerable populations, such as children, would help to explain this allocation. Similarly, tailoring the eligibilities to tie into the published priorities of other groups in the state focused on clean air would improve the resonance of the BMP with stakeholders.

Thank you again for this opportunity to comment. We look forward to working with Illinois EPA on the implementation of the VW settlement in Illinois.

Sincerely,

[Signature]
Joseph C. Szabo  
Executive Director

JE:JCS/stk
Yates, Evan

From: Junaid Faruq
Sent: Tuesday, April 17, 2018 3:13 PM
To: EPA.VWSettlement; Frost, Brad
Cc: Katie Bell; Patrick Bean; Brooke Kintz; Albert Gore
Subject: [External] Tesla Comments to Illinois EPA - VW Settlement Appendix D
Attachments: Tesla Comments VW Mitigation Trust Appendix D - IL - FINAL.pdf
Importance: High

To: Illinois EPA

Please see attached for comments submitted on behalf of Tesla in regards to the Illinois EPA VW Settlement Appendix D Draft Beneficiary Mitigation Plan. We have also completed the required survey last week.

Thank you for consideration and review of our comments and survey responses, we look forward to further discussion and engagement on implementation of the plan. Please confirm acceptance of comments when possible.

Thank You

Junaid Faruq | Sr. Charging Policy Engineer | Business Development and Policy

TESLA
April 17th, 2018

Illinois Environmental Protection Agency (Illinois EPA)

RE: Volkswagen Mitigation Trust D - Beneficiary Mitigation Plan

I am writing on behalf of Tesla to share our comments in response to the Illinois EPA’s Draft Beneficiary Mitigation Plan for Illinois’ allocation of the Volkswagen (VW) Mitigation Trust. It will be critical to utilize the $108+ million allocated to Illinois under the VW settlement funds from Appendix D to maximize air quality benefits and help advance the state toward meeting its climate goals and electric vehicle goals of 15% of all vehicles purchased by 2025. Replacing heavy-duty (HD) diesel trucks and investing in light-duty (LD), medium duty (MD) and HD Zero-Emission Vehicle (ZEV) charging infrastructure can help achieve this objective.

Tesla recognizes that all classes of ZEVs are important to meeting the Mitigation Plan’s goals, yet given our expertise and products in the LD and HD electric vehicle (EV) market, our comments below focus primarily on LD and HD ZEVs. For instance, Tesla recently unveiled its Semi Truck, an all-electric Class 8 vehicle that consumes less than two kilowatt-hours of energy per mile and is capable of 500 miles of range. Production is expected to begin in 2019 for the 500 mile range model. Beyond reducing NOx emissions, the Tesla Semi also includes enhanced safety features, low cost of ownership, no loss of energy during idling, which is especially relevant to port drayage applications, and superior performance relative to standard, class 8 vehicles.

Regarding charging infrastructure, it is important to note that over 80% of EV charging occurs at home or at work, and although Level-3 (DC-Fast charging) is important for long distance travel, it is generally used as a backup solution for local drivers. Level-2 charging supports the majority of daily local travel and is vital for mainstream EV adoption.

In general, Tesla supports the Mitigation Trust’s primary purpose as specified under Appendix D, and although the Illinois EPA has not proposed allocating funds for Light Duty EV charging infrastructure, we urge the EPA to also consider the specific proposals Tesla has outlined to address the need for Level-2 charging infrastructure. Our comments below focus on providing several key principals and strategies for how the Beneficiary Mitigation Plan (BMP) can optimally allocate funds to maximize NOx reductions, in a cost-effective and equitable manner. These include:

1. Increasing the on-road project fund and focusing on replacement of heavy-duty diesel vehicles with HD ZEVs, and including HD charging infrastructure within the rebate.
2. Provide funds as close as possible to point of sale under a first come, first served model.
3. Allocate the full 15% (~$15 million) of eligible ZEV supply equipment funds for investment in LD charging infrastructure and include make-ready infrastructure rebates.
4. Focus LD ZEV infrastructure funds should on workplace and multi-unit dwellings (MUDs)

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2 Tesla. Available at: https://www.tesla.com/semi/.
3 https://www.nrel.gov/docs/fy17osti/69031.pdf
4 “Make-ready” includes the electrical infrastructure to support electric vehicle charging. Make-ready refers to the ‘full circuit’ infrastructure (i.e., panels, conduit, wiring) required for the EVSE to be connected up to but excluding the charging station itself.
Increase and focus funds on replacement of diesel vehicles with HD ZEVs and include HD charging infrastructure within the per-vehicle rebate.

Appendix D outlines a number of different mitigation actions and expenditures that are eligible to receive funds under the BMP. According to a report by the Chicago Metropolitan Agency for Planning (CMAP), HD vehicles are the single largest source of smog-producing NOx in the Chicago non-attainment area, and produce a third of all total on road vehicular particulate matter\(^8\). Relative to diesel and natural gas engine vehicles, HD EVs are up to four times more efficient and provide additional benefits that should be taken into consideration when developing the BMP.\(^9\) Beyond fuel efficiency, these benefits include reduced noise, lower overall maintenance cost, and no loss of energy during idling, which is especially relevant to port drayage applications, among other items.\(^10\)

**Replacement of Diesel Vehicles with HD ZEVs**

Given the long term impact the BMP funds can have on reducing NOx and other emissions, we recommend focusing funds first and foremost on ZEVs whenever feasible to achieve maximum NOx reduction relative to replacement of other alternate fuel trucks and buses.\(^11\)

Using the EPA Diesel Emissions Quantifier, replacement of Class 8 Long Haul Trucks (with trailer) provides a much greater NOx reduction (75%) over the lifetime of the vehicle relative to replacement of Class 7 transit buses.\(^12\) The VW Beneficiary Mitigation Plan toolkit developed by NASEO also indicates that Class 8 vehicle replacement provides greater NOx reduction relative to Class 7 transit vehicles\(^13\). In addition to other air quality goals, it is important therefore that BMP funding target the remaining high NOx-emitting fleets and further narrow the NOx reduction gap by replacing these vehicles with HD ZEVs wherever feasible.

**Eligibility of HD ZEV charging infrastructure**

Lastly, Tesla noted that although heavy-duty charging infrastructure is implied as an eligible expenditure under each section of the eligible truck replacement mitigation actions and expenditures, it has not been explicitly allocated funding under the current BMP.\(^14\) Tesla recommends that HD charging infrastructure be explicitly highlighted in Illinois’ BMP, or allow for a higher rebate amount for diesel replacement, if HD charging infrastructure is also requested, similar to the recent California\(^15\) and Colorado\(^16\) Beneficiary Mitigation Plan proposals. The proposal by the California Air Resources Board (CA Beneficiary) provides up $200,000 per Heavy Duty Class 8 Electric Vehicle, which includes the associated HD Charging Infrastructure. The plan allows for cumulative allocation of the benefit per site owner/project, meaning that a trucking operator who

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8 [http://www.cmap.illinois.gov/documents/10180/19427/2016-Pollution-Forecast-by-Vehicle-Class-Table_01-01-2011_final.pdf/dc5061ed-10b4-4f84-aee4-e2d3e83a28f](http://www.cmap.illinois.gov/documents/10180/19427/2016-Pollution-Forecast-by-Vehicle-Class-Table_01-01-2011_final.pdf/dc5061ed-10b4-4f84-aee4-e2d3e83a28f)
9 Ibid, p.2.
11 NASEO, VW Mitigation Plan Toolkit, Table 1. Available at: [https://www.naseo.org/Data/Sites/1/03-27-17_naseo-vw-beneficiary-mitigation-plan-toolkit-final.pdf](https://www.naseo.org/Data/Sites/1/03-27-17_naseo-vw-beneficiary-mitigation-plan-toolkit-final.pdf).
12 [https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq](https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq). The comparison was conducted using default values and a 2009 replacement date.
13 Ibid.
14 Consent Decree Appendix D, p.3. Available at: [https://www.arb.ca.gov/msprog/vw_info/vsi/vw-mittrust/documents/appendixd2.pdf](https://www.arb.ca.gov/msprog/vw_info/vsi/vw-mittrust/documents/appendixd2.pdf).
16 [https://www.colorado.gov/pacific/sites/default/files/AP_VW_Beneficiary_Mitigation_Plan.pdf](https://www.colorado.gov/pacific/sites/default/files/AP_VW_Beneficiary_Mitigation_Plan.pdf)
replaces five trucks with heavy duty Class 8 ZEVs, could use the balance of a hypothetical aggregate of $1m ($200k x 5) to pay for the HD charging infrastructure, if required.

Finally, we recommend that the Mitigation Plan allow for HD charging infrastructure funding to include the make-ready components as eligible expenditures under this section of the BMP. Make ready infrastructure improves the business case for a fleet owner to transition to HD ZEVs, thereby increasing adoption and further reducing overall NOx and GHG emissions.

Provide funds as close as possible to point of sale under a first come, first served model

Depending on the funding structure that is ultimately adopted by the BMP, we recommend that any incentive is offered as close as possible to the point of sale, which is broadly considered the most effective method of driving EV sales.\footnote{An incentive closer to the point of sale can also help provide some certainty to the customer for availability of funding.} Furthermore, to facilitate a seamless customer experience and ease of program administration, we support a first-come, first-serve project administration structure rather than a competitive bidding process.

Allocate the full 15% (≈$15 million) of eligible ZEV Supply Equipment funds for investment in LD charging infrastructure and include make-ready infrastructure rebates

As of April 2018, the charging infrastructure in the Illinois amounts to a total of 411 Level-2 and 56 Level-3 chargers.\footnote{A recent EV infrastructure study from the National Renewable Energy Laboratory (NREL) estimates that the state will require 22,300 Level-2 connectors 880 Level-3 connectors to support the number of EVs predicted by 2030}\footnote{Tesla believes that these are conservative estimates and the actual need for charging infrastructure is greater.} Even when considering the on-going and additional investments in LD charging infrastructure being made through the VW settlement funds being deployed by Electrify America, it appears that the state is far from meeting the need. Therefore, Tesla recommends that the BMP allocate the full possible 15% of the funding to LD charging infrastructure.

Appendix D provides several definitions that impact the development of the LD funding allocation under the BMP. Appendix D defines “Infrastructure’ as the equipment used to enable the use of electric powered vehicles (e.g., electric vehicle charging station).”\footnote{It also states that “each Beneficiary may use up to fifteen percent (15%) of its allocation of Trust Funds on the costs necessary for, and directly connected to, the acquisition, installation, operation and maintenance of new light duty zero emission vehicle supply equipment for projects as specified below.”} While not explicitly defined in Appendix D, we strongly encourage the BMP to include funding of Level-2...
make-ready infrastructure, which includes wiring, conduit and subpanel installation, etc. given that these are often the greatest costs of installing EV charging stations.\textsuperscript{23} 

Limiting funding to the final charging connector (only), unless leveraging alternative funds for EV make-ready infrastructure, indirectly hinders an essential component of an EV-ready parking structure – the electrical capacity upgrade and wiring. Including EV make-ready infrastructure (not just the electric vehicle supply equipment (EVSEs)) as approved criteria for funding could substantively reduce barriers to EVSE deployment, particularly in multi-unit dwellings (MUDs). Thus, Tesla recommends funding focus on both make-ready infrastructure as well as EVSE.

Making funds available to support EV make-ready infrastructure in new and existing common parking areas could result in greater adoption of EVs by those residents who may be considering switching from a gasoline vehicle. Once a parking area or structure is EV make-ready, a relatively nominal amount of funds (<$1000) are then required to purchase and connect an EVSE at each occupant parking space.

Different rebate amounts can be provided for make-ready and EVSE components as the make-ready infrastructure can often represent a significantly higher portion of the installation costs. A separate rebate for the EVSE-only would also allow customer preference of EVSE depending on their required application. To ensure funds are better applied, Illinois EPA should also consider economies of scale to improve overall cost-effectiveness of funding disbursement and thus set a minimum EVSE port number requirement per project. Additionally, the choice of EVSE should be left up to the site owner so that they can choose what best suits their needs.

\textbf{LD ZEV infrastructure funds should be focused on Workplace and Multi-Unit Dwellings}

Appendix C of the VW settlement allocates more than $1.2 billion nationally for ZEV charging infrastructure through Electrify America.\textsuperscript{24} Phase one of the investment plan is to spend 82% of the funds on a national Level-3 ‘Direct Current (DC) fast charging’ network that covers almost every state, representing more than 2,500 DC fast chargers.\textsuperscript{25} Future phases of the investment plans may target additional DC fast charging infrastructure. This initiative will satisfy some of the long distance charging needs along major highway corridors; however, Tesla acknowledges the need for more Level-2 home and workplace charging, where more than 80% of EV charging occurs.\textsuperscript{26}

We, therefore, recommend that Illinois EPA focus the 15% of LD ZEV charging infrastructure funds primarily on multi-unit dwellings and workplaces (Level-2 charging). In the context of MUDs, residents may not have access to any charging infrastructure nor have the ability to deploy such infrastructure to the extent that they do not own the physical property where the charging infrastructure would need to be deployed. Even in instances where residents can deploy this infrastructure, the costs of retrofitting a single parking spot can be prohibitive. Notably, in many cases, standard parking lots in multi-unit residences and workplaces do not have either the electrical capacity needed to charge EVs, nor do they have the correct wiring to connect an EV charging post and connector (EVSE).

\textsuperscript{23} Southern California Edison, Charge Ready Advisory Board Meeting Number 5(August 2017), Slide 11.
\textsuperscript{24} EPA, VW Clean Air Act Civil Settlement. Available at: https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement.
\textsuperscript{25} Electrify America, Investment Plan. Available at: https://www.electrifyamerica.com/our-plan.
\textsuperscript{26} Idaho National Laboratory, Charging Behavior Revealed. Available at: https://www.intl.gov/article/charging-behavior-revealed-large-national-studies-analyza-ev-infrastructure-needs/.
Therefore it is critical that LD ZEV infrastructure funds target MUDs to reduce cost barriers associated with electrical upgrades and EVSE installation. The costs for a make-ready MUD infrastructure projects can be minimized through economies of scale by enabling multiple make-ready parking spaces per garage, thereby reducing the per-space cost. For example, the Charge Ready Program initiated by Southern California Edison (SCE) found that in the case of retrofitting a building with EV make-ready infrastructure, a five space project averaged approximately $14,000 per space; however, a 25 space project resulted in a $7,000 cost per space.27

Specifically, Tesla recommends that LD ZEV infrastructure funds focus on upgrading the electrical capacity (i.e. adding panel breaker space) to support a minimum of 20% of total parking spaces, and install the necessary wiring to support as many additional spaces as possible, preferably up to 100% of spaces.

*  *  *

Tesla appreciates the opportunity to provide feedback on the development of the BMP at this early stage of process and the level of transparency being provided by Illinois EPA in designing this plan. As outlined above, Tesla provides several recommendations to help guide the development of the BMP. These include maximizing LD EV infrastructure investments, a ZEV centric strategy, replacement of heaviest NOx emitters, and coordination among state agencies.

We look forward to continuing engage in the development process and to reviewing the draft BMP once available.

Sincerely,

Junaid Faruq
Sr. Charging Policy Engineer, Business Development and Policy
Tesla

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27 Southern California Edison, Charge Ready Advisory Board Meeting Number 5 (August 2017), Slide 11.
I have been in the forklift ind. from 1979 I am experienced and trained in electric gas propane and diesel forklifts.

I have seen the industry try different things over the years and some work and some do not. In my opinion the young people need to be taught how to live and be self sufficient. It means a lot to a person's life and frame of mind to have dignity. There is a lot of the vw's that were the problem sitting next to the old Mitsubishi plaint in Normal Il. I am fully capable of helping set up a refight of the vw's in to simple electric cars that the students can refit and then sell or buy and drive. This I think will help the young people and the cars will be used and not junked. The same cars that caused the problem will be electric.
State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
Major school bus lines need to be converted from decal to natural gas alcohol or propane so our children will stop being killed from decal exhaust every school day. I have a background in forklifts since 1979 and I have worked on all kinds. I believe the US government has developed a conversion for decal engines years ago. I believe this is the best way to spend the money you some how collected. I can help with if you are interested.

Tom Smolinski
Good evening,

Please see my attached comments on the BMP. Thank you.

Jennifer Hughes, P.E., CFM
Public Works Director

This message may contain confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version. Village of Oswego, 100 Parkers Mill, Oswego IL, 60543, www.oswegoil.org
April 17, 2018

Re: Comments on the Volkswagen Settlement BMP

To whom it may concern:

Thank you for this opportunity to provide comments on IEPA’s proposed program to address the Volkswagen Settlement. After reviewing the website devoted to this issue, we offer the following comments:

1. We request that IEPA provide the terms, conditions, and application for review. It is difficult for communities to assess whether this program is beneficial without understanding the process for applying or accessing the money. IEPA’s guidance is difficult to interpret with respect to eligible vehicles. For example, the text indicates “Class 4-8 School Bus, or Transit Bus (Eligible Buses)”. The adjacent figure “Examples of Truck Engine Classes appears to indicate that dump trucks, and by extension, municipal snow plows are eligible. We strongly recommend that dump trucks, fire trucks, and other municipal vehicles be included in the eligible list.

2. If dump trucks, fire trucks, and other municipal vehicles are not included in the program, we request that this made be explicitly clear so that municipalities to not spend time pursuing grants under this category.

3. It is unclear how the percentages for on-road, school bus, and off-road projects were determined. We recommend that consideration be given to increasing the funding percentage of on-road projects to a minimum of 25% while reducing the percentage from off-road projects.

4. We recommend the state allocating 5 percent for administrative expenditures be reduced to 1% and the remaining funds be redirected towards on-road projects.

If you have any questions regarding these comments, please contact me at [redacted] or at [redacted]

Sincerely,

Village of Oswego

[Signature]

Jennifer M. Hughes, P.E., CFM
Public Works Director
Dear Illinois Environment Protection Agency

I am writing to urge you that an oversight committee be used to guide the VW settlement money!

I do not feel the present plan is not adequate! Why electric school busses. Not much bang for the bucks. What are we doing with the off road money? that is a lot of money! I feel this money is a once in a lifetime opportunity and we need to make the best of that opportunity! I have had a the chance to meet a lot of people in the alt fuel industry and there is no one answer!. If the question is to take out the extra exhaust that was released from the VW vehicle's. I am a member of clean city's which has a large list of company's on the cutting edge of alt fuel. I also just retired from UPS (36Y) and strongly feel that if some of this money was made available to UPS to go electric that would give you a better bang for your money then electric school busses. Even those electric school busses would be nice for the kids! But the air won't be any cleaner? I don't think!.

So again I urge that an oversight committee be used.

Sincerely Tom Belle
Yates, Evan

From: Jeff Reitz
Sent: Wednesday, April 18, 2018 9:42 AM
To: EPA.VWSettlement
Subject: [External] Beneficiary Mitigation Plan
Attachments: CSBS comment letter to IL EPA.docx

Please let me know if you have any questions regarding the attached Beneficiary Mitigation Plan.

Jeff

Jeff Reitz | President/CEO | Central States Bus Sales, Inc.
Submitted via email to epa.vwsettlement@illinois.gov

August 10, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

As the President/CEO of Central States Bus Sales (CSBS), I write to thank the Illinois Environmental Protection Agency (IL EPA) for the opportunity to comment on the Beneficiary Mitigation Plan (Draft Framework). Central States Bus Sales, Inc. has been the authorized Blue Bird School Bus Dealer in the State of Illinois since 1975.

School buses offer Illinois with a cost-effective NOx reduction solution, provide economic benefit to the state and financially challenged school districts, and deliver important health benefits to the most sensitive populations. Alternative fuel school buses, in particular, can dramatically decrease NOx emissions over even the cleanest diesel vehicles in addition to providing fleet organizations with lifetime economic and environmental benefits. Over 400 alternative fuel school buses are operating in Illinois by over 20 school districts and contractors. Furthermore, over 12,000 propane-fueled buses in more than 800 school districts nationwide have been deployed by Blue Bird dealers, including through our dealership.

Our dealership works closely with school districts and contractors on pupil transportation operations and maintenance. We thus have demonstrated expertise with the complex and nuanced needs that allow our children to be safely and efficiently transported to and from school daily. For these reasons, we respectfully recommend consideration of the following facts outlined below in addition to several modifications proposed to the Draft Framework.
Recommended Draft Framework Modifications

CSBS commends Illinois on its efforts to prioritize school buses, though notes that the current proposal would not fully take advantage of the NOx reduction potential of alternative fuel school buses. We thus recommend that IL EPA set-aside at least $30 million for a Clean School Bus Program. Furthermore, based on our experience participating in and supporting other similar programs throughout North America, we feel that flexibility beyond electric and an emphasis on all alternative fuels is important. This could be accomplished through a variety of means, including, but not limited to:

- Create fuel-specific carve outs within the Clean School Bus Program to include all alternative fuels, propane, CNG and electric (e.g., $15M of the $30M for alternative fuel school buses)
- Prioritize alternative fuel applicants over other applications by including bonus points for such projects in the application scoring criteria
- Provide increased incentive levels to an alternative fuel vehicle application over diesel (i.e. fund 50% of propane, CNG, or electric vehicle versus 10% of diesel vehicle)

As described below, diesel vehicles in many duty cycles are proving to emit beyond their certification level. We feel strongly the intent of the VW Settlement and consequent funding opportunity to reduce NOx should be of focus through selection of projects, including consideration of what projects would have been achieved without Illinois EMT funding assistance. Many diesel replacement programs are already scheduled within fleet organizations, so consideration should be given to whether or not the organization is going above and beyond to partner with IL EPA and assist the state in reducing emissions.

Finally, we recommend that IL EPA consider applicants outside of the two non-attainment areas. Rural school districts tend to operate the oldest, dirtiest buses and also have the most consistent annual funding challenges.

Alternative Fuel School Buses Yield Immediate Air Quality and Public Health Benefits

There are over 9,700 model year 2009 and older school buses in operation in Illinois that qualify for replacement under the Environmental Mitigation Trust criteria. Below, our joint analysis with Roush CleanTech shows that the state could quickly and cost-effectively replace over 600 school buses with an investment of $30 million.
Table 1. Example of Potential School Bus Replacements Using $30 Million of IL EMT

<table>
<thead>
<tr>
<th>School Bus Program Proposal ($)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Buses Operating in State (# Units)</td>
<td>15,000</td>
</tr>
<tr>
<td>Est. Pre-2009 Buses in Operation (# Units)</td>
<td>9,799</td>
</tr>
<tr>
<td>Est. Cost of 2019 Model Year Diesel Bus ($)</td>
<td>$85,000</td>
</tr>
<tr>
<td>Est. Cost of 2019 Model Year Propane Bus ($)</td>
<td>$93,000</td>
</tr>
<tr>
<td>Est. Cost of 2019 Model Year CNG Bus ($)</td>
<td>$125,000</td>
</tr>
<tr>
<td>Est. Cost of 2019 Model Year Electric Bus ($)</td>
<td>$350,000</td>
</tr>
<tr>
<td>Total Illinois VW EMT Allocation ($)</td>
<td>$106,107,923</td>
</tr>
<tr>
<td>School Bus Program Proposal ($)</td>
<td>$30,000,000</td>
</tr>
<tr>
<td>Propane Bus Incentive ($), Based on 50% of Total Bus Cost</td>
<td>$46,500</td>
</tr>
<tr>
<td>CNG Bus Incentive ($), Based on 50% of Total Bus Cost</td>
<td>$62,500</td>
</tr>
<tr>
<td>Electric Bus Incentive ($), Based on 50% of Total Bus Cost</td>
<td>$175,000</td>
</tr>
</tbody>
</table>

| Number of Estimated Bus Replacements, Propane Scenario | 645 |
| Number of Estimated Bus Replacements, CNG Scenario | 480 |
| Number of Estimated Bus Replacements, Electric Scenario | 86 |
| % of pre-2009 bus fleet, propane scenario | 6.58% |
| % of pre-2009 bus fleet, CNG scenario | 4.90% |
| % of pre-2009 bus fleet, electric scenario | 0.87% |

The potential air quality benefits and the cost to achieve those are the most important data points to consider.

By extrapolating the data further, the analysis below was completed using lifecycle emissions data calculations from the 2017 ANL AFLEET tool with in-use adjustment and displays the life cycle of an average school bus which was assumed to be 15 years and 12,600 miles per year. The goal here was to compare the baseline emissions from a 2007 model year diesel bus (i.e. replacing an average 2007 model year school bus with a new school bus) to a variety of alternative fuel options. The average estimated cost of a school bus is shown; however, this could vary depending on options selected (i.e., camera system, GPS, etc.).
Table 2: Propane buses offer the most cost-effective NOx reduction solution

<table>
<thead>
<tr>
<th>Type of School Bus Purchased</th>
<th>Average Cost</th>
<th>NOx Reduced (Lifetime Pounds)</th>
<th>Cost-Effectiveness (Cost per Pound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane Conventional</td>
<td>$93,000</td>
<td>912</td>
<td>$102</td>
</tr>
<tr>
<td>CNG Conventional</td>
<td>$125,000</td>
<td>837</td>
<td>$149</td>
</tr>
<tr>
<td>Electric Conventional</td>
<td>$350,000</td>
<td>1,137</td>
<td>$308</td>
</tr>
<tr>
<td>Diesel Conventional</td>
<td>$85,000</td>
<td>86</td>
<td>$991</td>
</tr>
</tbody>
</table>

As shown above, there is minimal variance in the NOx reductions achieved between the alternative fuel options over the service life of a school bus. However, the diesel options show a significant decrease in emissions reduction opportunity over the life even despite their meeting current EPA standards. Propane is the lowest cost alternative and is also the most cost-effective alternative at reducing NOx in most cases and in school bus applications specifically. In fact, propane is 90% more cost effective than diesel at reducing NOx emissions in school buses.

Propane School Buses Are the Most Cost-Effective Solution to Reduce NOx Emissions

ROUSH’s model year 2017 propane school buses recently received its CARB certification at 0.05 grams NOx per brake horsepower-hour (g/bhp-hr).1 This new propane engine is 75 percent cleaner than today’s cleanest diesel engines that are compliant with the model year 2010 standard of 0.2 g NOx / bhp-hr and 99 percent cleaner than the oldest, pre-2007 model year buses still operating in many school districts today.2 What’s more, ROUSH is also actively working to obtain CARB certification at 0.02 g/bhp-hr NOx making it among the cleanest school bus available, especially when considering in-use emissions impacts as described in the next section.

Propane school buses are also a smart investment for Illinois school bus fleets and businesses. Our customers are reporting fuel cost reductions of 60 percent per gallon and operations and maintenance savings of $0.37 per mile, as compared to diesel, are documented.3 Propane school buses can thus support your agency’s efforts to achieve cost-effective NOx emissions reductions, and also provide opportunity for long-term fiscal enhancement locally.

The Environmental Mitigation Trust Funds Should Be Used to Generate Proven and Verifiable Air Quality Reductions via Alternative Fuels

Though we appreciate that Illinois may be receiving comments supporting the use of clean diesel technology, we urge the state to use caution when funding new diesel vehicles and equipment for several reasons.

First, very recent test data published by West Virginia University revealed that diesel school buses produced **26 times** the amount of NOx as propane school buses in a duty-cycle representative of most school buses. The Propane Education & Research Council (PERC) contracted the West

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2 For model year 1998 to 2003 diesel engines, EPA established a NOx emission standard of 4.0 g NOx / bhp-hr. Please refer to EPA’s **summary table** of diesel engine exhaust emission standards for further detail.
Virginia University (WVU) Center for Alternative, Fuels, Engines, and Emissions to perform a research program testing in-use emissions and performance of propane versus diesel fueled engines in a school bus application.\textsuperscript{4}

Second, recent analysis by the International Council on Clean Transportation (ICCT) indicates that negative health impacts from diesel-sourced NO\textsubscript{x} emissions are increasing, despite regulatory limitations.\textsuperscript{5} Indeed, laboratory-certified vehicles met mandatory emission limits but exceeded NO\textsubscript{x} emission limits for heavy-duty diesel vehicles, by 1.45 times on average in real world operation. These excess diesel NO\textsubscript{x} emissions contributed to an estimated 1,100 premature deaths in the United States in 2015.\textsuperscript{6}

Finally, new test data published by the University of California at Riverside indicates that the selective catalytic reduction (SCR) systems on today’s new diesel vehicles fall short of controlling NO\textsubscript{x} emissions in many duty cycles.\textsuperscript{7}

These studies raise a worthwhile question: What is the wisdom of using funds derived from high-emitting diesel vehicles (i.e., Volkswagen’s offending cars) to now fund high-emitting diesel vehicles?

Conclusion
CSBS would like to work with you and your team to ensure the most cost-effective and environmentally beneficial use of Illinois Volkswagen Settlement Funds. Thank you for considering our request. We look forward to continued dialogue with you and your team, and to a future collaboration that will help Illinois meet its air quality goals.

Sincerely,

\textit{Jeff Reitz}

Jeff Reitz
President
Central States Bus Sales


Director Messina,

Thank you for the opportunity to comment on the draft Beneficiary Mitigation Plan (BMP).

Waste Management has been a pioneer in natural gas since the early 1990s and invested more than $1 billion in transportation innovation. In fact, Waste Management has the largest fleet of heavy-duty natural gas trucks with over 6,100 in operation. We support this fleet with fueling capabilities at 100 of our sites, including 25 public fueling stations. In Illinois, Waste Management has over 500 diesel trucks to be replaced by natural gas trucks. Our diesel trucks are an older fleet (and thus have higher emissions) because we have been investing in natural gas trucks in those states offering incentive programs for such investments.

We recommend the Illinois Environmental Protection Agency give preference to compressed natural gas vehicles and funding for private industry. According to the Natural Gas Vehicle Association of America (NGVA), natural gas vehicles deliver the most cost effective nitrogen oxides (NOx) emissions reductions, dollar for dollar, of all vehicles eligible for VW Settlement Funds. Natural gas engines are the cleanest heavy-duty truck engines in the world. In September 2015, the U.S. EPA and the California Air Resources Board (CARB) certified the world’s first heavy-duty engine that emits NOx at levels so low they are considered “near-zero” (0.02g NOx/bhp-hr). This is the cleanest commercially available heavy-duty engine available in the market today, offering the ability to reduce emissions 90% below even the most stringent U.S. EPA standards. Compared to new diesel trucks, natural gas engines today meet an optional Low NOx Standard that is ten times cleaner than the standard required for new diesel engines. In addition, the new “Near-Zero” engine has tailpipe emissions comparable to or lower than the NOx emitted to produce electricity used to charge a comparable heavy-duty All-Electric Truck.

Because the VW Settlement Fund must be used to address excess NOx emissions through vehicle purchases or repowers, the State of Illinois has a significant opportunity to make a real impact in reducing NOx as well as the associated “free” greenhouse gas (GHG) emission reductions, in the urban and suburban areas of the state. We would ask the State to earmark funds in the mitigation plan for private industry vehicles from the VW Settlement Fund to achieve the biggest environmental bang and allow the funding to go three times as far by taking advantage of private investment with additional economic activity. CNG trucks are proven at scale and offer immediate air quality improvements in Illinois.

The refuse industry is a perfect industry for natural gas trucks as they run similar routes each day and always return to the same spot. Transitioning to a natural gas fleet requires significant capital investment - over $300,000 per truck. This investment results in significant reduction in NOx - which is what the VW Settlement is intended to specifically remedy as well as GHG emissions. CNG vehicles are 26% more cost effective on a dollar-per ton of NOx reduced basis than a new diesel trucks. A new, near-zero NOx CNG truck will emit about 0.04 tons of NOx over its lifetime versus an existing diesel, which emits 1.11 tons of NOx. Funding natural gas vehicles will lead to the largest dollar-for-dollar total reduction in NOx emissions associated with this funding.

Thank you for the opportunity to submit comments on behalf of Waste Management of Illinois, Inc.

Recycling is a good thing. Please recycle any printed emails.
Dear Mr. Frost:

Natural Gas Vehicles for America (NGVAmerica) is pleased to submit comments (attached April 17 2018 file) to the Illinois Environmental Protection Agency on its VW Beneficiary Mitigation Plan to use funds from the Volkswagen Partial Consent Decree. These comments are in addition to our comments from April 7 2017 (also attached). As the national trade association for natural gas vehicles, NGVAmerica knows that natural gas vehicles play an unmatched role among alternative fuel vehicles in delivering the most NOx reductions for the lowest cost and therefore should have a strong role in the Illinois VW Beneficiary Mitigation Plan.

Please contact us with any questions or if you would like to meet in person to discuss our comments.

Thank you,

Sherrie Merrow
Director, State Government Advocacy
NGVAmerica
April 7, 2017

Alec Messina
Director
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
alec.messina@illinois.gov

RE: NGV America Comments on the Volkswagen Diesel Emissions Settlement and the Environmental Mitigation Trust Implementation for the States

Dear Director Messina:

Natural Gas Vehicles for America (NGV America), the national trade association for the natural gas vehicle industry, respectfully submits the following comments on how the State of Illinois can best use the Environmental Mitigation Trust (EMT or Trust) funds ($108.6 million) that the state will receive as part of the Volkswagen (VW) diesel emission settlement. These comments are intended to inform the decision-making process as Illinois begins to consider and develop the Environmental Mitigation Plan required by Trust.

The VW EMT funds provide an extraordinary opportunity for Illinois and other states to put significantly cleaner, lower-polluting vehicles on the road in public and private fleets. This funding can and should be used by Illinois to continue its commitment to accelerating the use of cleaner, alternative fuels that offer a cost-effective alternative to funding diesel vehicles.

The latest natural gas engines are the only “near-zero” engines that are certified to perform at 0.02 g/bhp-hr of nitrogen oxide (NOx) emissions or better and should not be confused with diesel engines certified to the 2010 EPA standard of 0.2 g/bhp-hr NOx standard. The 0.02 g/bhp-hr NOx standard requires that engines outperform the federal standard by 90 percent and is the cleanest heavy-duty engine standard today. It also is the lowest level currently recognized under California’s Optional Low-NOx Standard (OLNS) for engines. NGV America’s comments rely on data generated by evaluating the latest commercially available technology when comparing emissions benefits between natural gas, diesel and electric vehicle and engine types. Natural gas engines are the only available internal combustion engines that have been certified to California’s 0.02 OLNS and thus are the only true Near Zero engines available in the marketplace today.

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 and delivering the most nitrogen oxide (NOx) emission reductions for the lowest cost.

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1 See SCAQMD press release from June 3, 2016 providing details on the petition filed by state authorities urging the U.S. EPA to adopt the 0.02 NOx standard (http://www.aqmd.gov/home/library/public-information/2016-news-archives/nox-petition-to-epa) (Today’s action follows a March 4 vote by the SCAQMD’s Governing Board to formally petition the U.S. EPA to adopt a so-called “near-zero” or “ultra-low” emissions standard for heavy-duty truck engines that is 90 percent cleaner than the current standard).

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The following pages outline key facts related to vehicle emissions, total cost of ownership, and current availability, and NGVAmerica's recommendations on how EMT funds can be allocated effectively for reducing emissions.

The Need to Take Meaningful Action Today

The funding available through Volkswagen's Environmental Mitigation Trust comes at a time when it is critical to address transportation emissions. The American Lung Association's "State of the Air 2016" report found that air pollution continues to be a pressing concern with more than half of all Americans—166 million people—living in counties where they are exposed to unhealthful levels of ozone and particulate pollution.

Medium- and heavy-duty on-road vehicles are the number one source of ozone-forming emissions of nitrogen oxides (NOx) in almost every metropolitan region in the U.S., therefore there is considerable opportunity to develop and deploy funding programs that make an immediate and tangible impact on air quality and related public health issues.

Sustainable, Responsible, Available: Natural Gas Vehicles

Today's natural gas vehicles (NGVs) are proven technologies that can uniquely, immediately, and cost-effectively transform our nation's medium- and heavy-duty transportation sector. The advantages of natural gas as a transportation fuel include its domestic availability, widespread distribution infrastructure, low cost, and inherently clean-burning qualities.

In these comments NGVAmerica presents the compelling reasons that states should prioritize funding for NGVs to maximize the impact of the available funding. As your organization is aware, the EMT was set up to fund projects that make an impactful reduction on NOx emissions to mitigate the excess emissions currently in our air from the non-compliant light-duty diesel vehicles VW sold. NGVAmerica strongly believes that NGVs are the best solution to meet the core goals put forth by the Volkswagen EMT funding. NGVs are:

1. **Sustainable:** NGVs maximize long-term emission reductions
2. **Responsible:** NGVs extend the funding and foster economic development
3. **Available:** NGVS meet the diverse operating requirements of every fleet application

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1. **Sustainable: NGVs Maximize Long-Term Emission Reductions**

*Key Point:* Today’s natural gas medium- and heavy-duty engines provide *unmatched* reductions of smog-forming emissions of nitrogen oxides (NOx).

“Near Zero-Emissions”: EPA and CARB Certified a Heavy-Duty Natural Gas Engine to 0.02 g Standard

In September 2015, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) certified the world’s first heavy-duty engine that emits oxides of nitrogen (NOx) at levels so low that they are considered at “near-zero” (0.02 g NOx/bhp-hr). This is the cleanest commercially available heavy-duty truck engine available in the market today, offering the ability to reduce emissions 90% below even the most stringent U.S. EPA standards.

![90% NOx Reduction](image)

**NGVs Have Lower NOx Emissions Than All-Electric Trucks**

The emission benefits of the new “Near-Zero” engine are well documented in the 2016 *Game Changer* report issued by Gladstein, Neandross and Associates (GNA)². The GNA report indicates that a truck or bus equipped with a natural gas engine that has been certified to the 0.02 g/bhp-hr Optional Low NOx Standard has tailpipe NOx emissions that are comparable to – or possibly lower than – the amount of NOx emitted to produce electricity used to charge a comparable heavy-duty All-Electric Truck.

² Gladstein, Neandross & Associates, *Game Changer Technical White Paper* (2016) [http://ngvgamechanger.com/](http://ngvgamechanger.com/), Section 6.4 and Appendix 1. Emissions of low-NOx natural gas engines produce NOx emissions that are comparable to or lower than similar electric drive vehicles in all 50 U.S. states when considering upstream NOx.

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Critical Insight:
Study Finds that Natural Gas Engines Outperform Diesel Engines in Real World Situations

Natural gas (NG) engines today meet an optional Low NOx standard that is ten times cleaner than the standard required for new diesel and natural gas engines. However, the in-use emission benefits of NG engines could be even more significant.

A recent report published in *Environmental Science and Technology*³, evaluated in-use emissions of earlier model year NG vehicles and found that NG engines performed much better in real world conditions (i.e., operating within city limits in low-speed, high-idling situations), registering NOx levels that were 96% lower than levels produced by tested diesel engines equipped with the latest emissions controls. The study found that diesel NOx emissions operating in similar conditions produced emissions that were 5-7 times higher than in-use certification limits in some cases.

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**Related Recommendations for EMT Funding**

- **Provide a higher level of funding for technologies that are proven to exceed federal emission levels for nitrogen oxides**
  - Vehicles with engines certified to California’s Optional Low-NOx Standard should receive the highest level of funding (e.g., 25% in the case of private sector vehicle replacements)
  - Use the state’s approved DERA plan to fund low-NOx natural gas trucks (i.e., 35% of the replacement cost for private vehicles equipped with low-NOx engines)

- **Provide the highest level of funding to applications that will reduce the largest share of NOx emissions**
  - Evaluate the main mobile source(s) of NOx emissions in urban and non-attainment areas (Note: In most regions, this means prioritizing funding for short-haul, regional-haul, and refuse trucks)
  - Do not segment the funding — fund the projects that best achieve the most NOx reductions

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2. **Responsible**: NGVs Extend the Funding and Foster Economic Development

- **Key Point**: NGVs are far more cost-effective in delivering emission reductions than other alternative fuel options, such as hybrid and electric vehicles.

### NGVs Offer a Fast Return on Investment

While NGVs typically cost more than gasoline or diesel vehicles upfront (largely due to the cost of high-pressure and insulated fuel tanks which are necessary to store CNG or LNG), owners and operators of high mileage vehicles typically see a pay back in as little as 18–24 months. This is due to:

- **Lower Fuel Costs**: Natural gas fuel prices have historically had a significant discount relative to gasoline and diesel and offer more stability compared to the costs of petroleum based fuels. Lower oil prices have recently reduced the differential in price, but according to the Energy Information Agency, the long-term outlook is for natural gas prices to remain stable and low, while volatility and higher prices return for gasoline and diesel fuels. For many users, the savings in fuel costs can translate into significant savings over the life of a vehicle, depending on fuel efficiency and the number of miles driven. The greatest savings are currently being seen in heavy-duty, high mileage fleets.

- **Lower Maintenance Costs**: NGVs are easier and cheaper to maintain than diesel trucks because they have:
  - No diesel particulate filter (DPF)
  - No DPF regeneration or waste disposal
  - No selective catalytic reduction (SCR)
  - No diesel emission fluid (DEF)

### NGVs Have Been Road-Tested by Leading Fleets

There are more than 160,000 NGVs on U.S. roads today, spanning all weight classes and vehicle applications. The adoption of NGVs has been pioneered by several high-profile fleet operators, including UPS, Anheuser-Busch, Kroger, FedEx, Frito Lay, Waste Management, LA Metro, all of which performed exhaustive analysis to determine the best vehicle and fueling options for their fleet based on application, range, duty cycle, and payload.

Given the significant fuel and emission reductions realized by early adopters, the popularity of NGVs has continued to build in the U.S., with 20% of all U.S. transit buses now running on CNG or LNG, 35 airports operating NGVs in their private fleets or championing policies that encourage use by private fleets, and more than 50% of new refuse trucks running on natural gas.

To fuel these vehicles, natural gas infrastructure is rapidly expanding with more than 1,640 CNG and 123 LNG fueling stations operating today.

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Dollar-for-Dollar Natural Gas Delivers Greater Numbers of Total Vehicles and Greater Total Tons of NOx Emission Reductions

This is illustrated by the chart below which looks at several different funding options for natural gas and electric vehicles including providing 100% of the cost of new, replacement vehicles for public fleets, using the maximum funding levels specified in the settlement for natural gas and electric vehicles purchased by private fleets, or funding only the incremental cost of new, replacement vehicles. In each case, the deployment of natural gas vehicles (e.g., regional haul trucking, refuse trucks, and transit buses) will provide the most NOx emissions reduction to comply with the EPA’s latest national ozone standards.

**Chart: Heavy-Duty Truck Deployment & NOx Reduction Comparisons Under Different Funding Scenarios**

**EMT Funding $7.5 Million Short Haul Truck Example**

<table>
<thead>
<tr>
<th></th>
<th>Fund 100% of Cost</th>
<th>Fund 25% NG, 75% EV Cost</th>
<th>Fund Incremental Cost Only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Vehicles Deployed</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Gas Trucks</td>
<td>50</td>
<td>200</td>
<td>124</td>
</tr>
<tr>
<td>Electric Vehicle Trucks</td>
<td>23</td>
<td>31</td>
<td>33</td>
</tr>
<tr>
<td><strong>Tons of NOx Reduced</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Gas Trucks</td>
<td>23</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Electric Vehicle Trucks</td>
<td>47</td>
<td>8</td>
<td>19</td>
</tr>
</tbody>
</table>

**Critical Insight:**
Comparable All-Electric Vehicles Cost 2-3x More Than an NGV

While actual cost depends on the application, an all-electric medium- or heavy-duty vehicle usually costs two to three times the amount of a comparable vehicle powered by a 0.02 g NOx natural gas engine. As noted above, funding heavy-duty NGVs delivers greater emission reductions than similar projects involving all-electric trucks, and they offer the best ability to reduce emissions on a large scale because the funding will extend further.

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Related Recommendations for EMT Funding

✓ Ensure that funding incentivizes adoption by both public and private fleets
  - While it might be tempting to fund public vehicles at the 100% level, this will limit the total number of deployed vehicles and therefore lessen the overall emission reductions
  - Funding levels should be large enough to offset the incremental cost (as compared to cost of a new diesel vehicle) of new, cleaner vehicles, as well as to address the fact that replaced vehicles must be scrapped
  - For private fleets, use available state funding sources to supplement the Volkswagen funds to ensure that new, cleaner trucks are truly incentivized by covering the full incremental cost (compared to baseline diesel vehicles) and to address economic loss associate with scrappage

✓ Prioritize funding for clean vehicles rather than fueling infrastructure
  - Funding should be used to incentivize fleets and vehicle acquisitions where existing fueling infrastructure exists to better support investments that have already been made
  - If fueling infrastructure needs to be developed, funding should be secured as part of private-public partnerships. Using the funding in this way will encourage additional economic development in the state and increase the availability of stations for future deployments

3. Available: NGVs Meet the Diverse Operating Requirements of Every Fleet Application

✧ Key Point: Dozens of models of medium- and heavy-duty low-emission natural gas vehicles and engines are commercially available from reputable, world-known OEMs with established sales and service networks.

Wide Array of NGV Options Commercially Available

There are many natural gas vehicle options available from several original equipment manufacturers (OEM). These vehicles can be purchased from the dealership through a process that has been streamlined for the customer.

Many other medium- and heavy-duty vehicle options are available through small vehicle modifiers (SVM). These companies manufacture conversion systems that have been certified and approved by the U.S. Environmental Protection Agency and/or the California Air Resources Board. These approved systems can be installed on new and used vehicles to run on natural gas.

Additionally, Cummins Westport currently offers the 6.7L ISB-G, 8.9L ISL-G and the 11.9L ISX-G natural gas engines. These spark-ignited engines are used in a variety of applications, including refuse trucks, transit buses, cement trucks, short- and regional-haul tractors, delivery trucks, school buses, and shuttles. Roush offers a school bus engine that is certified to the Low-NOx standard of 0.10. Retrofit and repower options are also available from a variety of manufacturers.

For a full list of EPA and CARB certified engines, visit [www.ngvamerica.org/vehicles/vehicle-availability](http://www.ngvamerica.org/vehicles/vehicle-availability). A list of available NGV manufacturers and conversion companies follows.

Advocating the increasing use of NGVs where they benefit most.
For the economy. For the environment. For health. For security. For America.
Critical Insight: Heavy-Duty Electric and Fuel Cell Vehicles are Not Commercially Available

As of today, three unique fuel-technology combinations hold the most promise to successfully transform America’s HDV transportation sector to zero and near-zero emissions:

1. Near-zero-emission internal combustion engines fueled by conventional or renewable natural gas
2. Zero-emission battery-electric-drive systems
3. Zero-emission hydrogen fuel cell systems

While battery-electric and hydrogen fuel cell systems can offer extremely low emissions profiles, the lack of commercially available heavy-duty and limited medium-duty products and charging/fuel distribution networks makes implementation in the near future impractical. Furthermore, these vehicles are being developed by niche, start-up companies and have only been used in early test programs; comparatively, medium- and heavy-duty NGVs from major OEMs have been widely, commercially available in dozens of applications for over two decades. Near-zero-emission internal combustion engines fueled by conventional or renewable natural gas are the only option to immediately and cost-effectively provide extremely low NOx and GHG emissions in high-impact HDV sectors.

---

Related Recommendations for EMT Funding

- Prioritize funding for commercially available products
  - Given that the NOx emissions from Volkswagen vehicles are already in the air, funding should be concentrated to projects that allow us to deploy the cleanest vehicles available today (i.e., not pre-commercial or research and development projects)

- Scale funding to incentivize the cleanest engines available
  - Provide greater funding for medium- and heavy-duty engines that deliver NOx reductions over and above what is currently required for new diesel vehicles
  - 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 and should not be used to fund more diesel fueled vehicles

Advocating the increasing use of NGVs where they benefit most.
For the economy. For the environment. For health. For security. For America.
Let's Transform Clean Transportation Together

NGVAmerica and its members are eager to serve as a resource to assist the Illinois Environmental Protection Agency in its evaluation and development of the state’s Beneficiary Mitigation Plan. We strongly encourage the state to recognize the superior and unmatched role that natural gas vehicles can play in delivering nitrogen oxide (NOx) emissions reductions required by the settlement and Trust.

NGVAmerica welcomes the opportunity to meet with you to provide further information and analysis on the economic and environmental benefits of natural gas vehicles in Illinois. Please contact Jeff Clarke, NGVAmerica General Counsel & Director Regulatory Affairs at [redacted], or Sherrie Merrow, NGVAmerica State Government Advocacy Committee Chair at [redacted] to set up a meeting and for additional information.

Sincerely,

Matthew Godlewski
President

Cc: Julie Armitage, Bureau Chief, Bureau of Air, Illinois EPA

Summary of NGVAmerica's Recommendations for EMT Funding

✔ 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 to begin

✔ Prioritize funding for clean vehicles rather than fueling infrastructure

✔ Scale funding to incentivize the cleanest engines available

✔ Ensure that funding incentivizes adoption by both public and private fleets

✔ Accelerate the funding in the early years to maximize the NOx reduction benefits

✔ 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

Advocating the increasing use of NGVs where they benefit most.
For the economy. For the environment. For health. For security. For America.
Make a Bold Impact on Air Quality Today

Allocating funds to deploy low-NOx natural gas vehicles provides the best way to deliver immediate and cost-effective NOx reductions and air quality benefit. Nearly 40% of Americans are exposed to unhealthy levels of ozone and particulate pollution. Volkswagen’s $2.9 billion Environmental Mitigation Trust Fund provides each state an incredible opportunity to make an immediate and tangible impact on air quality by targeting medium- and heavy-duty vehicles, the leading source of these toxic air contaminants in almost every metropolitan area.

Natural gas vehicles (NGVs) are transforming the medium- and heavy-duty transportation sector.

Sustainable:

**NGVs Offer the Cleanest Heavy-Duty Truck Engines in the World**

Comparing EPA Engine Certifications

<table>
<thead>
<tr>
<th>Engine Certification</th>
<th>EPA NOx Emission Standard</th>
<th>90% Cleaner</th>
<th>New Ultra Low NOx Natural Gas Heavy-Duty Vehicle Emissions</th>
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<tr>
<td>Cleanest Diesel Engine</td>
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<td>0.02</td>
</tr>
<tr>
<td>Cleanest Natural Gas Engine</td>
<td></td>
<td></td>
<td>0.02</td>
</tr>
</tbody>
</table>

Natural gas medium- and heavy-duty engines provide unmatched reductions of smog-forming emissions of nitrogen oxides (NOx). In 2015, a revolutionary natural gas engine was certified by the U.S. Environmental Protection Agency and California Air Resources Board to a level 90% below the EPA’s current exhaust standard and 90% below the cleanest diesel engine. A truck with this engine has an emission profile equivalent to that of a heavy-duty battery electric truck.

Available:

**NGVs are Commercially Available Today Across All Applications Qualified for Funding**

NGVs are commercially available from traditional truck and bus OEMs with established sales and service networks. Retrofit and repower options are also available from a variety of manufacturers.

Applications Include:
- Cement Mixer
- City Delivery Truck
- Conventional Van
- Dump Truck
- Fuel Truck
- Heavy Semi Tractor
- Large Walk In Van
- Motor Coach
- Rail Truck
- Refrigerated Van
- Refuse Truck
- Single Axle Van
- School Bus
- Shuttle Bus
- Transit Bus
- Tow Truck
- Utility Truck

Responsible:

**Dollar-for-Dollar, NGVs Deliver the Most Cost-Effective NOx Emissions Reductions**

The calculations shown below assume the deployment of the cleanest commercially available model for each application. Funding natural gas vehicles will lead to the largest total reduction in NOx emissions.

**Short/Regional Haul Trucks**

- **Natural Gas**
  - Technology Cost: $150,000
  - NOx Reduced: 3,210 lbs
  - $39 per lb of NOx

- **Diesel**
  - Technology Cost: $100,000
  - NOx Reduced: 1,658 lbs
  - $54 per lb of NOx

- **Electric**
  - Technology Cost: $324,000
  - NOx Reduced: 2,919 lbs
  - $85 per lb of NOx

**Refuse Trucks**

- **Natural Gas**
  - Technology Cost: $150,000
  - NOx Reduced: 2,181 lbs
  - $140 per lb of NOx

- **Diesel**
  - Technology Cost: $270,000
  - NOx Reduced: 1,417 lbs
  - $190 per lb of NOx

- **Electric**
  - Technology Cost: $670,000
  - NOx Reduced: 2,941 lbs
  - $313 per lb of NOx

**School Buses**

- **Natural Gas**
  - Technology Cost: $149,000
  - NOx Reduced: 671 lbs
  - $220 per lb of NOx

- **Diesel**
  - Technology Cost: $115,000
  - NOx Reduced: 396 lbs
  - $291 per lb of NOx

- **Electric**
  - Technology Cost: Not Commercially Available

**Transit Buses**

- **Natural Gas**
  - Technology Cost: $380,000
  - NOx Reduced: 1,218 lbs
  - $278 per lb of NOx

- **Diesel**
  - Technology Cost: $300,000
  - NOx Reduced: 555 lbs
  - $540 per lb of NOx

- **Electric**
  - Technology Cost: $750,000
  - NOx Reduced: 1,916 lbs
  - $569 per lb of NOx

For more information visit: www.ngvamerica.org/vwsettlement
Natural Gas is a clean, low-cost, and domestically abundant transportation fuel.

### Natural Gas Provides Long-Term Fuel Price Stability and Cost Savings

<table>
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<tr>
<th>Year</th>
<th>Diesel</th>
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<th>Natural Gas</th>
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<tr>
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<td>$6</td>
<td>$5</td>
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</table>

Projected Fuel-Price Differentials (prices per $DGE)

Currently, natural gas prices can be $0.75 to $1 or more lower than diesel at the pump, with a firm price advantage expected to remain for decades as shown in the chart above.

Beyond the fuel-price differential, the pump price of natural gas remains relatively stable for two reasons. First, it is domestically sourced. Second, the commodity cost of natural gas only makes up 23% of the pump price so price fluctuations have minimal impact.

In contrast, approximately 60% of the price of diesel fuel is impacted by the market cost of crude oil, which is largely sourced from politically unstable, high-conflict regions. When crude oil prices increase, diesel prices follow suit which can lead to significant swings in a fleet's fuel costs.

### Natural Gas Reduces WTW Greenhouse Gas Emissions

- **LNG**: 11% reduction
- **CNG**: 17% reduction
- **RNG**: 115% reduction

Source: NGVAmerica Fleets Run Cleaner on Natural Gas White Paper 2015

### Volkswagen EMT Funding Recommendations

- Fund alternative fuel vehicle projects that cost effectively maximize NOX reductions for both public and private fleets
- Provide higher funding levels for medium- and heavy-duty engines that deliver NOX reductions greater than current EPA standards
- Target funding for technologies that have demonstrated lower in-use emissions
- Prioritize funding for commercially available products and projects that are ready to begin
- Stay flexible in plans and leverage private investment to stretch dollars and get more alternative vehicles on the road

Natural gas vehicles can fulfill all of these recommendations today!

For more information visit: www.ngvamerica.org/vwsettlement
After review of the draft BMP it is clear the available funds for Mitigation are planned to be directed to higher populated areas of the state where a majority of the affected vehicles were registered which is understandable. Being from Calhoun County we are in what I would consider the Metro East as a majority of our residents commute to the St. Louis, Madison County, or the Metro East area for work. With a very low population of less than 5000 we however are not included as part of the Nonattainment area and thus likely not to be high priority to receive funding based on the current BMP. As higher populated municipalities have much greater resources in the form of higher tax revenues these municipalities have the ability to update their equipment fleets. As a smaller low income community Calhoun County has very little resources to upgrade our equipment fleet. With total General Fund revenues from taxes countywide of less than $300,000 annually and a cost of over $160,000 for a new dump truck it is virtually impossible for my department to upgrade our fleet primarily speaking of the 10 dump trucks we have that date back to 1995 and are high emission diesel systems. I believe there should be an element of the BMP to address the needs of low revenue government agencies that can not afford to update their fleet of large equipment.

Additionally Calhoun County operates a Ferry Terminal via a public private partnership with the Calhoun Ferry Company. This Ferry Company operates 6 tug boats and services multiple terminal locations transporting vehicles across the Mississippi River from Calhoun and Jersey Counties in Illinois to St. Charles County Mo. The Ferry Company is currently struggling to produce the funds to upgrade the engines in multiple tugs due to the high cost of the new engines that meet emission standards. I would hate to see the Ferry Company not be able to utilize this funding to upgrade their tugs because Calhoun is not considered a priority area although the Ferry company does service the St. Louis area.

Thank You,

Kyle Godar, P.E.
County Engineer
Calhoun County Highway Department
Julie Armitage,

Attached is Auburn CUSD #10 letter regarding Draft Beneficiary Mitigation Plan.

Ruby Howard

[Signature]

Ruby Howard
Auburn CUSD #10
unit secretary
Submitted via email to epa.vwsettlement@illinois.gov

April 18, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Superintendent for Auburn CUSD #10, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 1359 of students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport 924 of students per day. Our buses range in age from 1991 – 2009 with an average fleet age of 13 years. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school fuels over diesel replacement.

**Recommended Changes to the Draft Beneficiary Mitigation Plan**

In order to increase the cost-effectiveness of projects and stretch the state’s dollars (further Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.
Our district has been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet and would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student’s exposure to emissions such as NOx and others that are associated with pre-2007 diesel buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest – and dirtiest – school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

[Signature]

Darren Root  
Superintendent  
Auburn CUSD #10

---

Brad Frost, Office of Community Relations Manager
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Dear Mr. Frost:
Please accept the attached petition from the Citizens Utility Board, a consumer group in Illinois. The petition is signed by 422 Illinois consumers about the Volkswagen Settlement and asks the state to maximize investment in electric vehicles. Thank you for your time.

Sincerely,

Jim Chilsen
Director of Communications
Citizens Utility Board (CUB)

Citizens Utility Board

For money saving advice and consumer tips, visit www.citizensutilityboard.org
Brad Frost, Office of Community Relations Manager
Illinois Environmental Protection Agency

Dear Illinois Environmental Protection Agency:

Please build a strong plan to use the $108 million allocated to Illinois in the Volkswagen settlement. Specifically, we urge you to:

- Reserve up to 15% of the funding for electric vehicle infrastructure. Electrifying our transportation sector is good for the environment, and, if managed correctly, can reduce our power bills.

- Maintain at least 10% of the funding for electric school buses. We hope the funding is increased to provide additional assistance to low-income communities impacted by pollution.

- Invest more in electrification of the transportation sector.

Thank you!

Jim Chilsen
Director of Communications
Citizens Utility Board (CUB)
Stuart Wilkins
Joan Prerost
Wyman Whipple
James Juracek
Jean Smilingcoyote
Lawrence Rostis
William Egan
Mary Liss
Stephen Limperis
Walter Fudala
Beverly Bojanowski
Rodney Sleeth
Jon Cole
Mary Gompers
Delmar Thomas
Meredith West
Mark Burger
Colleen McAbee
Michael Douvris
Karen Wilson
David Gray
Vito Sessa
Barbara Sullivan
Leon Spektor
Jean Schub
Jean Schub
Orrin Merritt
John Feigl
Peter Stepaniuk
Crystal White
Robert Miller
Ryan McCulloch
Vincent Micari
Patricia Monahan
Fran Smead
Amy Maloney
Chris Heuman
Larry Crunk
Thomas Monahan
Thomas Kenny
Edlin Brewer
Melodie Huffman
Dawn Silver
Mimi Biskus

John Johnson
Carolyn Motley
Karen Snell
Warren Snider
Carolyn King
Ruth Motley
James Sitarzynski
Susan Francis
Cheryl Arvio
Joseph Brumman
Steve Schueth
Gary Peters
James Glover
James Santella
James Switzer
Beverly Bean
Dawn Albanese
Guy Whitney
Terence Ehn
Ben Ogren
Peter Gunther
James Schuetter
Thomas Humphrey
Joan Jaffe
Bernadette Payne
Ned Pendleton
Robert Zdziarski
Dale Duda
Janet Skotzko
Ira Kaufman
John A Beavers
Mary Klinke
Russell Ziegler
Scott Coovling
Barbara Nosko
Ken Litrenta
Tim Lindquist
Georgia Shankel
Marilyn Kofler
Cindy Jensen
Jaquelyn Zevin
Linda Barklow
Chris O'Connell
Julie Samuels
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Gregory Smith
Mark Szalkus
Keith So
Richard Davis
Elizabeth Glass
Kevin Havener
Anthony Marici
William Fish
Lenore Reeves
Earl Castner
Mark Battaglia
Linda Raske
Jean Kuethe
Robert Schmidt
Marianne Flanagan
Paul Slone
David Bier
Kathy Hatfield
Beveryl Ann Conroy
N H
Lois Kalish
Gwenna Weshinskey
Betsy Eppinger
Louise Friedenson
Kirk Shellko
Ara Robinson
Sandra Morse
Peggy Prince
Michael Drew
Marilyn Kalemba
David Acocks
Beth Fischer
N. Sehncutka
Helen Morris
Phillip Grutsch
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Hope Moore
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Matthew Barre
William Van Pelt
Glenna Eaves
Michael Bazzoni
Kevin Hogan
Pete Kutcher
Karen Leypold
Jason Lindsey
Raymond Gicela
Marian Petrovich
Teswsaq Fischer
Kaveh Aflaki
Russ Rall
Basem Alkaissi
Euga Jackson
Carolyn Gann
Mark Porter
Pauline Thomas-Brown
Inez Turner
Beverly Sizemore
Kirk Imoto
Danielle Shannon
Miguel Jimenez
Maria Moreno
Christine Zaprzalka
DuPage County is the second largest county in Illinois with approximately 930,000 residents. In addition, we are centrally located within the Illinois Environmental Protection Agency’s (IEPA) Priority #1 designated area as defined in the draft Beneficiary Mitigation Plan (BMP). As Chairman of the DuPage County Board, I believe it is essential that local agency input help shape and structure the final BMP and criteria to be used to evaluate and select projects. DuPage County respectively submits the following comments.

1. Available funding should be allocated to each of the Priority Areas 1, 2 and 3 in direct proportion to the affected Volkswagen vehicles registered in each Priority Area. This will ensure that our citizens most impacted by the non-conforming emissions software which is the subject of this Settlement are, in turn, the most benefitted under the terms of the Settlement Agreement.

2. As entrusted stewards of limited public funding, agencies are continually challenged to reduce costs without diminishing services. The Settlement represents an opportunity for the public to directly benefit through reduced public expenditures. Settlement funding should be prioritized and directed to public agency infrastructure including local governments, transit and school buses.

3. Active and ongoing public agency commitments to reduce emissions should be a criteria when evaluating eligible projects or programs. Alternative fuel fleet conversions and infrastructure and repowering of existing equipment represent public agencies continual commitment to air quality and should benefit from this Settlement. In addition, a public agency’s decision to over-match Settlement funding should be favorably considered in the evaluation process.

4. Priority Area #1 is in non-attainment of National Air Quality Standards and therefore eligible to receive Congestion Mitigation Air Quality (CMAQ) Federal Funding. Through a rigorous evaluation process, several diesel retrofit projects, both public and private, have been selected and included in the state’s/regional CMAQ Program. These retrofit projects should be eligible to receive Settlement funding assistance to offset the local match requirements.

Thank you for the opportunity to comment on the draft Beneficiary Mitigation Plan. If you have any questions, please feel free to contact me or Director of Transportation/County Engineer, Christopher Snyder, at [redacted].

Regards,

Daniel J. Cronin
Chairman
DuPage County Board
Important Legal Notice:

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Thank you for your consideration.
April 18, 2018

Julie Armitage
Illinois Environmental Protection Agency, Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

via email to epa.wvsettlement@illinois.gov

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Superintendent for Winchester CUSD #1, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 600 students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our buses range in age from 2003 - 2017. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

Recommended Changes to the Draft Beneficiary Mitigation Plan

In order to increase the cost-effectiveness of projects and stretch the state's dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs. Our district operates ten gas/diesel school buses and have been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet. We would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student's exposure to emissions such as NOx and others that are associated with pre-2007 diesel buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest—and dirtiest—school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

David C. Roberts
Superintendent
Please see the attached letter as our request for consideration for funds that could help our district transition to propane buses.

--

Cathy Croy
Clay City CUSD #10
Superintendent, Special Needs Coordinator

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Submitted via email to epa.vwsettlement@illinois.gov

August 10, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Superintendent for Clay City CUSD #10, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 300 students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport over 200 students per day. Our buses range in age from 2011 - 2013 with an average fleet age of 7.4 years. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

**Recommended Changes to the Draft Beneficiary Mitigation Plan**

In order to increase the cost-effectiveness of projects and stretch the state’s dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.
Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.

Our district has been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet and would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student’s exposure to emissions such as NOx and others that are associated with pre-2007 diesel buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest – and dirtiest – school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

Cathy Croy

Cathy Croy
Superintendent
Clay City CUSD #10

From: Jim Hynes EPA.VWSettlement
Sent: Wednesday, April 18, 2018 2:53 PM
To: [External] Request to Revise Distribution of Settlement Funds

IEPA Representatives,
I am respectfully requesting that consideration be given to fire apparatus regarding eligibility for VW settlement funding. I am aware that the consent decree put forth as a result of the VW settlement does not specifically mention fire apparatus, however it also does not specifically exclude fire apparatus, it is my belief that those vehicles specifically mentioned in the consent decree are merely examples and not intended to specifically define or exclude vehicles that meet the same criteria regarding NOx emissions reduction. There are several vehicles in my fleet as well as other fire department and fire district fleets throughout Cook County that predate the 2007/2010 diesel EPA emission standards. The annual mileage of most fire apparatus may be somewhat low when compared to commercial trucks however the annual engine hours are significant which directly correlates to notable production of harmful emissions. It is not unusual for fire apparatus to be kept in service for 15 – 25 years, I cannot see why municipal dump or cargo trucks which are usually kept in service for 10 – 15 years, qualify for funding and fire apparatus do not? Please take a moment to consider the validity of my request there is certainly an opportunity here to reduce emissions, help our environment and partially fund the replacement of fire apparatus.

I would also ask that the proposed method for the distribution of these funds be reconsidered. The current distribution has a large portion of the funding going to rail and other off road entities. Available data shows that these entities account for less than 5% of the NOx emissions within Cook County, I suggest that a more equitable method of fund distribution be used. I would suggest that grants of $25,000 - $100,000 be issued to incentivize vehicle replacement or repowering based on a simple scoring system for the amount of NOx emission reduction achieved. This method would be much farther reaching than what is currently proposed. Proposing a new vehicle purchase to any governing body becomes a much easier pill to swallow if there is funding available to ease the burden of that purchase. Also, these types of programs are always well received by the public when seen on websites and social media in both the public and private sector. What tax payer or consumer would not love to know that a portion of the funds used to purchase the new low emissions fire truck or commercial delivery truck going down the streets of his or her community came from the IEPA as a result of the VW settlement? Let's make the $109,000,000 go farther, help more communities and effectively and efficiently reduce NOx emissions.

Respectfully,

Lt. James Hynes
Support Services Supervisor
Orland Fire Protection District
8525 W. Old Orchard Rd.
Orland Park, IL 60462
Ph: 708.473.7350
Fax: 708.473.7391
To: EPA.VW Settlement Grant for Illinois
From: Steven McCain, Village of Dixmoor
Date: 4/18/18
Subject: Clean Air Initiative Grant

State of Illinois Environmental Protection Agency Representatives

My name is Steven McCain, Fire Chief for the Village of Dixmoor. We are currently in the process of restoring our Fire Department and seeking monetary help to meet this objective. I am seeking direction regarding an opportunity to apply for a grant so our community is able to purchase a new fire engine to serve the residents. I am seeking to replace our 1992 Fire Engine with a new energy efficient vehicle that is environmentally friendly.

Please respond back at your earliest convenience with information or direction regarding this matter.

Thank you for your time regarding this matter.

-Pete

Respectfully Submitted,

Steven A. McCain
Fire Liaison
Dixmoor Fire Department
Dear Mr. Frost,

Attached please find United Airlines’ comments on the Illinois EPA’s Draft Beneficiary Mitigation Plan for the Volkswagen Mitigation Trust. Please let me know any questions you may have. Thank you for the opportunity to provide input.

Aaron Robinson
Senior Manager – Environmental Strategy and Sustainability
United Airlines | Corporate Support Center

United | Learn about United Eco-Skies | Big Metal Bird Episode

eco-skies
April 19, 2018

Brad Frost
Manager, Community Relations
1021 North Grand Ave. East
Springfield, IL 62794-9276

Re: Volkswagen Mitigation Trust – Draft Beneficiary Mitigation Plan

Dear Mr. Frost:

United Airlines understands the Illinois Environmental Protection Agency is planning to allocate funds from the recent settlement with the Volkswagen Group toward supporting emissions reductions within the state. United Airlines applauds this effort and would like to express its interest in this opportunity and to respond to your request for public input on the draft Beneficiary Mitigation Plan by urging the state to include projects that replace or repower airport ground service equipment (GSE) with electric equivalents (electric GSE, or eGSE) in its final Beneficiary Mitigation Plan.

United Airlines is continually working towards increasing its use of electric GSE for our mainline United Airlines operations, and on behalf of our United Express partners. We have identified over 350 pieces of GSE at Chicago O’Hare International Airport that, with the right financial incentives, we would be interested in replacing or repowering with electrically-powered equipment. We believe our proposal strongly aligns with your goals of 1) reducing NOx emissions where affected Volkswagen vehicles are registered while taking into consideration areas that bear a disproportionate share of the air pollution burden, including environmental justice areas; 2) maximizing emission reductions; and 3) maximizing and leveraging funding.

The U.S. Department of Energy's Alternative Fuels Data Center estimates that electric vehicles in Illinois produce 69% less greenhouse gas emissions than fuel powered equivalents. At present 26% of United’s equipment in Illinois is electrified, despite the potential to increase this to 76%. Because common equipment standards provides numerous operational and cost benefits, the lack of incentives to electrify our fleet to this point has hindered our efforts, in contrast to other states where we have electrified over 50% of our fleet. Financial incentives such as the Volkswagen Mitigation Trust would enable us to overcome these barriers and incentivize us to buy electric replacements in the future rather than simply renewing our diesel fleet.

Airports represent hotspots for diesel emissions, most notably NOx, due to the heavy reliance on diesel fleets required to support aircraft operations. This heavy use of diesel GSE has created challenging work conditions for many of our own employees and other workers at airports, as their jobs requires them to work indoors and outdoors alongside the equipment. Replacing diesel equipment with electric GSE will reduce diesel emissions at known hotspots and improve worker safety and health.
One of the strong benefits United's proposal offers is that because GSE is only operated on airport grounds, emissions benefits will be realized in an area (Cook and DuPage Counties) that are designated as Priority 1 areas because they have the greatest number of affected Volkswagen vehicle registrations, they are designated as in nonattainment for ozone, and they bear a disproportionate share of the air pollution burden due to not just the airport, but supporting road, highway, and rail infrastructures nearby. Disadvantaged communities surrounding Chicago O'Hare International Airport also have been identified as key areas for environmental justice. These benefits stand in contrast to other projects that can easily be moved beyond priority areas or outside of the state.

In addition, the high utilization of GSE means that our proposal offers higher cost effectiveness than many other funding proposals. United has for many years partnered with the Chicago Department of Aviation on improving air emissions, including several infrastructure projects and ongoing pursuit of federal and state funding. One recent collaboration was submitting applications for eGSE projects to the Federal Aviation Administration and U.S. Environmental Protection Agency. Through this work we have together determined the cost effectiveness of various types of eGSE. Calculations were performed using the U.S. Environmental Protection Agency's Diesel Emissions Quantifier, which we understand you also plan to use in quantifying emissions savings. As shown below, the modeling for eGSE confirms a high overall cost effectiveness that we urge you to consider when allocating funds in the final Beneficiary Mitigation Plan.

<table>
<thead>
<tr>
<th>GSE Type</th>
<th>Horsepower</th>
<th>Gallons/ Hour</th>
<th>Hours/ Day</th>
<th>Tons NOx/ Year</th>
<th>Price</th>
<th>Cost/ Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Tractor</td>
<td>86</td>
<td>3.8</td>
<td>6</td>
<td>0.931</td>
<td>$210,000</td>
<td>$225,581</td>
</tr>
<tr>
<td>Belt Loader</td>
<td>59</td>
<td>1.2</td>
<td>8</td>
<td>0.707</td>
<td>$52,000</td>
<td>$73,564</td>
</tr>
<tr>
<td>Cargo Tractor</td>
<td>90</td>
<td>2</td>
<td>9</td>
<td>1.227</td>
<td>$55,318</td>
<td>$45,100</td>
</tr>
<tr>
<td>Forklift</td>
<td>48</td>
<td>0.75</td>
<td>4</td>
<td>0.373</td>
<td>$20,000</td>
<td>$53,608</td>
</tr>
<tr>
<td>Utility Lift</td>
<td>50</td>
<td>1.2</td>
<td>6</td>
<td>0.473</td>
<td>$82,000</td>
<td>$173,447</td>
</tr>
<tr>
<td><strong>Overall Cost/Ton based on United's planned Illinois request</strong></td>
<td><strong>$67,497</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Furthermore, we note that our project would be in close proximity to a previously identified environmental justice community. As noted earlier, one of the strengths of our proposal is that the emissions benefits will be realized in this area rather than dispersed.

We enthusiastically support your efforts and, if funded, commit to doing our part to help reduce air pollution in Illinois by increasing the use of zero-emission electric vehicles in Illinois. Please keep us informed of next steps in this process. If you have any questions or comments, please don't hesitate to contact me.

Sincerely,

/s/ Aaron Robinson

Cc:
Alec Messina, Illinois Environmental Protection Agency
Julie Armitage, Illinois Environmental Protection Agency
Aaron Frame, Chicago Department of Aviation

233 South Wacker Drive, 11th Floor – WHQEN
Chicago, IL 60606
Attached is a comment letter concerning the VW Settlement.

Gary DePatis
Superintendent
Virginia CUSD 64

OHANA means family and family means no one is left behind or forgotten!!
Submitted via email to epa.vwsettlement@illinois.gov

April 19, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan
Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Superintendent for Virginia CUSD 64, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 310 of students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport approximately 150 students per day. Our buses range in age from 2010 – 2017 with an average fleet age of 4 years. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

Recommended Changes to the Draft Beneficiary Mitigation Plan
In order to increase the cost-effectiveness of projects and stretch the state’s dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.
Our district has been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet and) would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student’s exposure to emissions such as NOx and others that are associated with pre-2007 diesel buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest – and dirtiest – school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

Gary DePatis
Superintendent
Virginia CUSD 64
Good morning. Please see attached correspondence from the National Waste & Recycling Association regarding the Beneficiary Mitigation Plan.

Peggy Macenas – Director, Midwest Region
mailto:mawaste@wasterecycling.org
pegym@wasterecycling.org
(T) 708-591-3350
(O) 1-800-437-2858
(F) 708-591-3352
(M) 708-691-1376
wasterecycling.org
April 18, 2018

Director Alec Messina
Illinois Environmental Protection Agency
Springfield, IL
Submitted via email to: EPA.VWSettlement@illinois.gov

RE: Comments on IEPA’s draft Beneficiary Mitigation Plan (BMP)

Dear Director Messina:

On behalf of the National Waste & Recycling Association, I am submitting the following comments on the draft beneficiary mitigation plan for the allocation of the Volkswagen Trust Fund.

Since motor vehicles, particularly heavy-duty vehicles, account for a large share of emissions contributing to air pollution and ozone formation, we are asking for consideration of increasing the funds earmarked in the draft BMP plan to for replacement of fleet vehicles.

Transitioning to a natural gas fleet requires significant capital investment – over $300,000 per refuse or recycling collection vehicle. This investment results in significant reduction in NOx – which is what the VW Settlement is intended to specifically remedy as well as GHG emissions. CNG vehicles are 26% more cost effective on a dollar-per ton of NOx reduced basis than a new diesel trucks. A new, near-zero NOx CNG truck will emit about 0.04 tons of NOx over its lifetime versus an existing diesel, which emits 1.11 tons of NOx. Funding natural gas vehicles will lead to the largest dollar-for-dollar total reduction in NOx emissions associated with this funding. The refuse industry is a perfect industry for natural gas trucks as they run similar routes each day and always return to the same spot.

Through the VW Trust, Illinois can promote significant expansion of the use of natural gas vehicles and deploy the cleanest available heavy-duty trucks in private fleets to achieve the NOx reduction goals of the Trust at the lowest cost. Natural gas engines are the cleanest heavy-duty truck engines in the world. In September 2015, the U.S. EPA and the California Air Resources Board (CARB) certified the world’s first heavy-duty engine that emits NOx at levels so low they are considered “near-zero” (0.02g NOx/bhp-hr). This is the cleanest commercially available heavy-duty engine available in the market today, offering the ability to reduce emissions 90% below even the most stringent U.S. EPA standards. Compared to new diesel trucks, natural gas engines today meet an optional Low NOx Standard that is ten times cleaner than the standard required for new diesel engines. In addition, the new “Near-Zero” engine has tailpipe emissions comparable to or lower than the NOx emitted to produce electricity used to charge a comparable heavy-duty All-Electric Truck.

Every day the waste & recycling industry is driving through our communities to provide services that keep our communities clean. We believe earmarking VW funds for the replacement of the older diesel vehicles would provide the biggest environmental benefit. According to the Natural Gas Vehicle
Association of America (NGVA), natural gas vehicles deliver the most cost-effective nitrogen oxides (NOx) emissions reductions, dollar for dollar, of all vehicles eligible for VW Settlement Funds.

The VW Trust funds provide an extraordinary opportunity for Illinois to cost-effectively transition to cleaner vehicle fuels with lower vehicle emissions.

Sincerely,

Chris Coulter,
Illinois Chapter Chair

Cc: Peggy Macenas, NWRA
I would like to make several comments concerning the VW Settlement.

- I would hope that the funds could be used for purchasing and/or retrofitting all vehicles (gas or diesel) and not limit it to just Class 4 - 8 freight hauling trucks. Include typical municipal vehicles such as snow plow trucks, dump trucks, aerial lift trucks, buses, street sweepers, fire trucks, ambulances, electric cars and light trucks, alternate fueled vehicles, etc.
- Create some type of voucher system. Municipalities may have a difficult time covering the full cost of a project and being reimbursed after the project is complete.
- Create a time frame that is conducive to the typical Municipal budgeting process.
- Make some portion of these funds available for municipalities.
- Make the program easy for municipalities to participate in. The red tape involved and the number of hoops an agency has to jump through is one of the main reasons most government agencies don't participate in these types of programs and why the funds sit and don't get spent.

Al Fonk
Fleet Services Supervisor
Village of Vernon Hills
Electric Buses

Clean Transportation for Healthier Neighborhoods and Cleaner Air

frontiergroup

illinois pigr

environment illinois
Electric Buses

Clean Transportation for Healthier Neighborhoods and Cleaner Air

Illinois PIRG
Education Fund

FRONTIER GROUP

Alana Miller and Hye-Jin Kim, Frontier Group
Jeffrey Robinson and Matthew Casale, U.S. PIRG Education Fund

May 2018
Acknowledgments

The authors wish to thank Kelly Blynn, Master of Science in Transportation and Master in City Planning, Massachusetts Institute of Technology; Kevin Brubaker, Deputy Director, Environmental Law & Policy Center; Morgan Ellis, Associate Director Clean Transportation for All Campaign, Sierra Club; Michelle Kinman, Charge Ahead California Campaign Director, Environment California; Mark LeBel, Staff Attorney, Acadia Center; Susan Mudd, Senior Policy Advocate, Environmental Law & Policy Center and Will Toor, Transportation Program Director, Southwest Energy Efficiency Project for their review of drafts of this document, as well as their insights and suggestions. Thanks also to Tony Duzik and Rachel J. Cross of Frontier Group for editorial support.

The authors bear responsibility for any factual errors. Policy recommendations are those of Illinois PIRG Education Fund and Environment Illinois Research & Education Center. The views expressed in this report are those of the authors and do not necessarily reflect the views of our funders or those who provided review.

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Layout: Alex Meltzer/meltzerdesign.net
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Executive Summary

Buses play a key role in our nation’s transportation system, carrying millions of children daily to and from school and moving millions of Americans each day around our cities. Buses reduce the number of individual cars on our roads, make our communities more livable and sustainable, and provide transportation options for people of all ages and abilities.

Yet, the majority of America’s buses remain dirty – burning fossil fuels like diesel that put the health of our children and communities at risk and contribute to global warming:

- Approximately 95 percent of America’s school buses, carrying some of the most vulnerable passengers, run on diesel.¹

- More than 60 percent of the nation’s nearly 70,000 transit buses run on diesel, and another 18 percent run on natural gas, while just 0.2 percent of buses are all-electric.²

Numerous studies have shown that inhaling diesel exhaust can cause respiratory diseases and worsen existing conditions like asthma. The negative effects are especially pronounced in children.

- Diesel exhaust is internationally recognized as a cancer-causing agent and classified as a likely carcinogen by the U.S. Environmental Protection Agency.³

- In a study of 61 million people in 2015, researchers found that exposure to diesel soot and ground-level ozone created by diesel exhaust was linked to higher rates of mortality.⁴

Diesel exhaust from buses poses a particular risk to health. Buses primarily travel where there are lots of people, including in the more densely-crowded areas of cities, on the busiest roads, and near schools. They also circulate continuously and make many trips, and therefore risk exposing many people to emissions.

The good news is that America can clean up its buses by making them electric. All-electric buses are here, and they’re cleaner, healthier and often cheaper for transit agencies, school districts and bus contractors to run in the long-term.
To clear our air and protect our health, policymakers should accelerate the replacement of diesel and other fossil fuel-powered buses with clean, electric buses.

- Replacing all of America's school buses with electric buses could avoid an average of 5.3 million tons of greenhouse gas emissions each year.\textsuperscript{5}

- Replacing all of the diesel-powered transit buses with electric buses in the United States could save more than 2 million tons of greenhouse gas emissions each year.\textsuperscript{5}

Dramatic declines in battery costs and improvements in performance, including expanded driving range, have made electric buses a viable alternative to diesel-powered and other fossil fuel buses.

- Each electric school bus can save districts nearly $2,000 a year in fuel and $4,400 a year in reduced maintenance costs, saving tens of thousands of dollars over the lifetime of a bus.\textsuperscript{7}

- The Chicago Transit Authority estimates that each electric transit bus in its fleet saves the city $25,000 in fuel costs every year.\textsuperscript{8}

Cities in the United States and around the world are taking the lead, committing to transition to cleaner, quieter and more efficient electric bus fleets.

- The idea of all-electric school buses is spreading across the country and pilot programs are now underway in states including California, Massachusetts and Minnesota.

\textbf{Figure ES-1. Estimated Annual Operating Costs of Transit Buses, by Fuel Type}\textsuperscript{9}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figures/Fig_ES-1.png}
\caption{Estimated Annual Operating Costs of Transit Buses, by Fuel Type.}
\end{figure}
• The mayors of Los Angeles and Seattle have joined a pact with 10 other mayors around the world to purchase only electric transit buses after 2025. Los Angeles County’s transit agency, Metro, committed to go all-electric by 2030, while Shenzhen, China, transitioned its 16,000 buses to electric in December 2017.

With reduced operating costs and no tailpipe emissions, all-electric buses and charging stations can be a smart infrastructure investment for school districts and transit providers across the country.

Electrifying buses is also an important first step towards broader adoption of heavy-duty electric vehicles, like trucks. While buses themselves account for a relatively small percentage of vehicle emissions, heavy duty vehicles as a whole are responsible for over a quarter of climate emissions from on-road transportation in the U.S.

To support more widespread adoption, state governments should:

• Allocate settlement money from Volkswagen’s “Dieselgate” settlement to subsidize the purchase of electric school and transit buses, as well as charging infrastructure.

• Create incentive programs and grants for transit agencies, school districts and bus contractors to help finance the up-front cost of electric buses and charging infrastructure.

• Facilitate the installation of charging infrastructure through programs that help cover the costs.

• Encourage utilities to design their rates in ways that support electric buses.

• Consider low-cost financing programs that help agencies, districts and bus contractors leverage other sources of funding, like Volkswagen settlement money.

• Identify other ways to ensure successful electrification of buses, including technical assistance and research, as well as the publication of data and lessons learned.

Transit agencies, school districts and bus contractors should:

• Replace buses powered by fossil fuels with the cleanest possible technology for the health of future generations: all-electric.

• Consider adopting goals to repower the entire fleet with electric buses over one replacement cycle.

• Ask state governments and beneficiary agencies to dedicate funds from the Volkswagen settlement to electric buses.

• Prepare for future adoption of electric buses by running electrical conduits necessary for charging infrastructure during any new construction or reconstruction of depots and parking lots.
Plugging In

Readying America’s Cities for the Arrival of Electric Vehicles
Plugging In
Readying America's Cities for the Arrival of Electric Vehicles

Illinois PIRG
Education Fund

FRONTIER GROUP

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Winter 2018
Acknowlegements

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The authors bear responsibility for any factual errors. The recommendations are those of Illinois PIRG Education Fund. The views expressed in this report are those of the authors and do not necessarily reflect the views of our funders or those who provided review.

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The adoption of large numbers of electric vehicles (EVs) offers many benefits for cities, including cleaner air and the opportunity to reduce greenhouse gas emissions. Electric vehicles are far cleaner than gasoline-powered cars, with lower greenhouse gas emissions and lower emissions of the pollutants that contribute to smog and particulate matter.\(^1\)

The number of EVs on America's streets is at an all-time high. Throughout 2016, sales of plug-in electric vehicles increased nearly 38 percent.\(^2\) In 2017, sales of electric vehicles were up again, increasing 32 percent over the year.\(^3\) The introduction of the Chevy Bolt, Tesla's Model 3 and other affordable, long-range electric vehicles suggests that growth in EV sales is just beginning. In fact, Chevrolet's Bolt EV was named *Motor Trend*'s 2017 Car of the Year.\(^4\)

But with more EVs on the road, and many more coming soon, cities will face the challenge of where electric vehicles will charge, particularly in city centers and neighborhoods without off-street residential parking.

The good news is that smart public policies, including those already pioneered in cities nationally and internationally, can help U.S. cities lead the electric vehicle revolution while expanding access to clean transportation options for those who live, work and play in cities.

Figure ES-1: U.S. EV Sales by Year, 2015-2017\(^5\)
Electric vehicles are poised for explosive growth.

Technological gains that allow electric vehicles to drive farther, charge faster, and be produced more affordably are revolutionizing the vehicle market. With adequate policy and infrastructure investments, Bloomberg New Energy Finance estimates that, globally, more than half of new cars sold by 2040 will be electric vehicles.6

Cities need to be ready for an influx of electric vehicles.

In a few short years, tens of thousands of electric vehicles could hit city streets across America, from Portland, Maine, to Portland, Oregon. Yet, as of now, most cities are unprepared for this pending influx. These vehicles will need a place to charge, so public access to EV charging stations will be critical, especially since only about half of vehicles in the U.S. have a dedicated off-street parking space, like a driveway or garage.7

Major cities will require the installation of hundreds to thousands of publicly accessible electric vehicle chargers in order to serve the increased demand for electric vehicles. Studies conducted separately by the National Renewable Energy Labora-

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Types of Electric Vehicle Charging Infrastructure11

There are three primary types, or levels, of electric vehicle chargers – Level 1, Level 2 and DCFC (often referred to as “fast charging”).

- Level 1 charging is from a standard wall outlet and provides a slow charge, adding 4 to 5 miles of range per hour. Therefore, with a Level 1 charger, an empty EV battery may need to charge for 10 hours to get 50 miles of range. Level 1 chargers can work well for at-home charging, where EV owners park overnight, and in many workplaces, since the typical commute in many metro areas is less than 10 miles each way.12 Because Level 1 charging requires only a standard three-prong outlet, it is often the most affordable way to offer charging, with minimal installation costs.

- Level 2 chargers require special installation but can charge an electric vehicle battery 2 to 6 times faster than a Level 1 charger, adding 12 to 25 miles of range per hour of charge, so 50 miles can be added in 2 to 4 hours. If people install a charger in front of their house, in their driveway, or in their garage, it is most likely a Level 2 charger. In public spaces, such as parking lots or on public streets, most chargers are Level 2, allowing EV drivers to charge their car for a few hours while at work or shopping. Level 1 and Level 2 plugs are standard in the United States so all EVs can charge at those charging stations.

- Fast chargers, known as DCFC (for direct current fast charge), can add 100 miles of range or more in an hour of charging – meaning an EV driver can add 50 miles to their battery in just half an hour. Different EV makes and models are compatible with different fast chargers and may require an adaptor to charge. Fast chargers will be especially important for long-distance travel when drivers won’t be stopping for hours at a time, so DCFC chargers work well at rest stops and gas stations off highways and are important for the viability of electric shared-mobility services, whose vehicles may be used for many trips – and travel many miles – in a given day. However, only pure battery electric vehicles can use DCFC charging, so it excludes plug-in hybrid EVs.

This report recognizes the value of Level 1 chargers as a low-cost option at homes, workplaces, and some public parking areas (like airports), but focuses on Level 2 and fast charging (DCFC) for public spaces, which are the chargers you would expect to find curbside, at workplaces and businesses, in parking garages and in other public areas.
tory, the Electric Power Research Institute, and Pacific Gas & Electric estimate that 1-5.2 public fast chargers are needed to support 1,000 electric vehicles. The National Renewable Energy Laboratory estimates that 36 non-residential Level 2 chargers are necessary for every 1,000 electric vehicles. Cities will also need to facilitate at-home charging since the majority of EV owners will need to park and charge their vehicles overnight at or near where they live.

The world’s leading EV cities have adopted key policies that enable urban residents to own and operate electric vehicles. In particular, these cities have been able to deliver electric vehicle infrastructure to urban drivers through innovative parking and planning policies, including:

- **Residential access to on-street EV charging:** Many residents, particularly in large cities, do not have access to an off-street parking spot where they might charge their electric vehicle overnight. Cities around the world are tackling this problem with innovative solutions to install or incentivize residents to install on-street charging infrastructure at curbsides in dense areas. For example, residents in London can ask the city to install, and mostly pay for, EV charging infrastructure at streetlights on their block.

- **Access to public charging stations:** By acting directly or partnering with other entities — such as private garages, public schools and community centers — cities can ensure that there are adequate

---

Table ES-1. Possible Number of Electric Vehicles on Selected U.S. City Streets by 2030 and Corresponding Publicly Accessible Charging Infrastructure Needs

<table>
<thead>
<tr>
<th>City</th>
<th>Number of EVs Estimated in City Limits by 2030</th>
<th>Level 2 Plugs in Workplaces Needed</th>
<th>Level 2 Plugs in Public Places Needed</th>
<th>Public Fast Charger Plugs Needed</th>
<th>Total L2 and DCFC Plugs Needed</th>
<th>Total L2 and DCFC Plugs Currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin, TX</td>
<td>29,000</td>
<td>650</td>
<td>405</td>
<td>45</td>
<td>1,100</td>
<td>495</td>
</tr>
<tr>
<td>Cleveland, OH</td>
<td>9,000</td>
<td>202</td>
<td>126</td>
<td>14</td>
<td>342</td>
<td>18</td>
</tr>
<tr>
<td>Denver, CO</td>
<td>36,000</td>
<td>807</td>
<td>502</td>
<td>56</td>
<td>1,365</td>
<td>161</td>
</tr>
<tr>
<td>Hartford, CT</td>
<td>4,000</td>
<td>90</td>
<td>56</td>
<td>7</td>
<td>153</td>
<td>52</td>
</tr>
<tr>
<td>Jersey City, NJ</td>
<td>5,000</td>
<td>112</td>
<td>70</td>
<td>8</td>
<td>190</td>
<td>20</td>
</tr>
<tr>
<td>Los Angeles, CA</td>
<td>348,000</td>
<td>6,312</td>
<td>3,730</td>
<td>201</td>
<td>10,243</td>
<td>1,456</td>
</tr>
<tr>
<td>Miami, FL</td>
<td>14,000</td>
<td>314</td>
<td>196</td>
<td>22</td>
<td>532</td>
<td>50</td>
</tr>
<tr>
<td>Philadelphia, PA</td>
<td>34,000</td>
<td>869</td>
<td>579</td>
<td>44</td>
<td>1,492</td>
<td>96</td>
</tr>
<tr>
<td>San Diego, CA</td>
<td>139,000</td>
<td>2,341</td>
<td>1,405</td>
<td>141</td>
<td>3,887</td>
<td>776</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>47,000</td>
<td>744</td>
<td>447</td>
<td>75</td>
<td>1,266</td>
<td>401</td>
</tr>
</tbody>
</table>
parking spaces for people to charge their EVs when they aren’t at home, for instance, while they are commuting, shopping or traveling.

- **Support for private investment in publicly accessible stations:** “Semi-public” stations can provide EV owners a place to charge at privately owned stations at businesses, parking garages or private driveways. By incentivizing the installation of shared charging stations, cities can optimize use of charging infrastructure.

- **Incentivized EV parking and charging:** Some cities have local government programs or agencies that offer discounted or free charging and parking for electric vehicles in public spaces.

Electric vehicles are an essential tool for cities to combat global warming and air pollution, and offer consumer benefits like lower fuel costs. Technological developments mean that EVs are poised to hit the market in record numbers. However, there is a lot left to be done. If cities fail to develop comprehensive plans for EV charging now, they risk being unprepared for large numbers of EVs hitting local streets in coming years.

**In order to be successful, cities will need to develop comprehensive solutions to accommodate electric vehicles, including convenient opportunities for charging.** Some specific strategies include:

- Expanding access to electric vehicle charging for residents without off-street parking, by dramatically increasing the number of charging stations in residential areas.

- Partnering with businesses and public entities (like schools, community centers and municipal offices) to use their existing parking infrastructure while providing EV charging.

- Facilitating and encouraging electric shared mobility options like carsharing, ridesharing and bikesharing.

- Directing municipal utilities to install charging infrastructure and coordinating closely with investor-owned utilities to maximize opportunities.

- Considering a demand-based and shared system for parking.

*Electric vehicle charging port on a lamppost in London. Photo: Jason Cartwright via Flickr, CC BY 2.0.*
Motiv-Powered All-Electric School Buses

Introduction
At Motiv Power Systems (est 2009 in California), we have taken a different approach to bring our electric vehicle technology to market. Instead of designing our own chassis and bodies from scratch, we have partnered up with industry leading OEMs and vehicle builders to leverage their reliability, decades of experience, and after-sales service networks. Today, we offer a family of all-electric chassis built on proven and established Ford chassis platforms. We then work with vehicle builders / body partners who have been able to build their proven vehicles on top of these electrified Ford chassis. In the last few years we have successfully deployed several Class 4-6 all electric vehicles – school buses, shuttle buses, delivery vans, work trucks and box trucks.

<table>
<thead>
<tr>
<th>CHASSIS</th>
<th>VEHICLE APPLICATIONS</th>
<th>BODY PARTNERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford E-450</td>
<td>School Bus, Shuttle Bus, Box Truck and other Work Trucks</td>
<td>Trans Tech, Champion, Rockport, CTEC, Ameritrans and more...</td>
</tr>
<tr>
<td>(Class 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ford F-59</td>
<td>Delivery / Walk in Van, Shuttle Bus and School Bus</td>
<td>Morgan Olson, Utilimaster and Starcraft Bus</td>
</tr>
<tr>
<td>(Class 6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ford F-53</td>
<td>Trolleys, Blood Mobiles and Book Mobiles</td>
<td>Hometown Trolley</td>
</tr>
<tr>
<td>(Class 6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ford F650</td>
<td>Shuttle Bus, Box Truck, Stake bed Truck, other Work Trucks</td>
<td>Rockport, CTEC, Champion and more...</td>
</tr>
<tr>
<td>(Class 6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We are proud to be the first and only all-electric chassis to receive eQVM (Qualified Vehicle Modifier) approval from Ford for Class 4-6 applications. Compared to other medium-duty EV solutions, our system's patented control system architecture provides more power and a smoother driving experience. Our modular battery and controller approach provides higher reliability and further reduces maintenance costs. Last but not least, our batteries are fireproof, 99% recyclable, and do not lose performance in cold weather!

Motiv powered Electric School Buses are a great option for schools looking to go green and take advantage of significant government incentives to replace old diesel buses with new electric ones. Motiv has been leading the charge - we deployed the first electric Type A school buses in the US in 2014, and have since deployed more than (20) electric Type A and Type C buses in CA and NY.

Fleets using Motiv-powered vehicles have seen approx. 85% savings in Operating Costs and 66% savings In Maintenance Costs compared to conventional ICE vehicles. Combined with government provided incentives, this results in significant savings on the Total Cost of Ownership over the life of a vehicle.
Indicative Pricing

We aim to learn your exact vehicle specifications to be able to provide firm pricing. In the interim, please see the table below for indicative pricing for your application. For larger quantities we will be able to provide discounts.

<table>
<thead>
<tr>
<th>Chassis Platform</th>
<th>Ford E-450 Cutaway</th>
<th>Ford F-59 Stripped</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Bus Manufacturer</td>
<td>Collins or Trans Tech</td>
<td>Starcraft (marketed by Creative Bus Sales)</td>
</tr>
<tr>
<td>Battery Configuration</td>
<td>5 batteries – 75 miles (conservative estimate)</td>
<td>5 batteries – 75 miles 6 batteries – 90 miles (conservative estimate)</td>
</tr>
<tr>
<td>Indicative Vehicle Price (before incentives)</td>
<td>5 batteries - $260,000</td>
<td>5 batteries - $320,000 6 batteries - $340,000</td>
</tr>
<tr>
<td>Typical Incentives (in select states)</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Seating</td>
<td>Up to 25 passengers</td>
<td>Up to 47 passengers</td>
</tr>
<tr>
<td>ADA/Wheelchair options</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Ongoing O&M Savings

Although electric vehicles cost more upfront, fuel costs are significantly lower than fossil fuel powered vehicles. We estimate each vehicle will save approx. $11,000 per year in fuel costs. We would be happy to provide exact numbers for your application once we have data on your routes and shifts.

Additionally, since there are considerably less moving parts in an EV, they require significantly less maintenance. No need for regular oil changes. No engine replacements or transmission failures. Since EVs have regenerative braking, brake pads are not needed to be replaced as often as on gasoline/diesel vehicles. The exact maintenance savings vary case by case, but in this application we estimate each vehicle will save approx. $5,000 per year on maintenance.

Charging Infrastructure

We recommend using a CS-100-3 Level 2 Charging Station manufactured by Clipper Creek. This charging station requires 3 phase power at 208/240V with 100A service. This equipment can be purchased from Motiv or from Clipper Creek directly. We recommend consulting with an electrician to install the charge station and to evaluate if your current backend electrical infrastructure will be sufficient. Motiv is available to help coordinate and consult as needed.

Expected Range and Route Analysis

Please note the expected ranges listed in the table above are for a single charge. Our system charges up 50% in approx. 2 hours and 75% in 4 hours. Hence our customers can get 100-150 miles per day assuming there is opportunity charging between shifts or routes. For dual shift or multiple shift operations, Motiv provides route.
analysis services to ensure sufficient charge time is available to complete the intended routes. During this analysis, a Motiv data analyst will review the planned routes, evaluating terrain, number of loops, frequency of loops, etc to confirm your route requirements can be met.

Telematics
Motiv offers a monthly subscription data service for all Motiv-powered vehicles. This service allows the fleet to log into the vehicle securely over an internet connection and query its current status. The service also saves data so the fleet operator can review historical vehicle performance. We would be happy to provide an in-person telematics demonstration with typical use cases and real vehicle data.

<table>
<thead>
<tr>
<th>OPERATIONAL STATISTICS OF TODAY</th>
<th>EMISSION STATISTICS OF TODAY</th>
<th>ENERGY STATISTICS OF TODAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC</td>
<td>Energy</td>
<td>Hours</td>
</tr>
<tr>
<td>in service</td>
<td>62.1%</td>
<td>72.3 kWh</td>
</tr>
<tr>
<td>not in service</td>
<td>37.9%</td>
<td>37.0 kWh</td>
</tr>
<tr>
<td>Distance</td>
<td>41.6 mi</td>
<td></td>
</tr>
<tr>
<td>Average speed</td>
<td>14.6 mph</td>
<td></td>
</tr>
<tr>
<td>Consumption in service</td>
<td>4.6 kWh/mile</td>
<td></td>
</tr>
<tr>
<td>SOC charged</td>
<td>31.4%</td>
<td></td>
</tr>
<tr>
<td>SOC used</td>
<td>65.2%</td>
<td></td>
</tr>
<tr>
<td>CO2 savings</td>
<td>129.2 g</td>
<td></td>
</tr>
<tr>
<td>NOx savings</td>
<td>13.2 g</td>
<td></td>
</tr>
<tr>
<td>Used</td>
<td>75.1 kWh</td>
<td>04.07 h</td>
</tr>
<tr>
<td>Energy</td>
<td>70.9 kWh</td>
<td>02.32 h</td>
</tr>
<tr>
<td>Duration</td>
<td>04.12 h</td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charged</td>
<td>0.9 kWh</td>
<td>00.10 h</td>
</tr>
<tr>
<td>Fast charged</td>
<td>0.0 kWh</td>
<td>00.00 h</td>
</tr>
<tr>
<td>Slow charged</td>
<td>0.9 kWh</td>
<td>00.29 h</td>
</tr>
</tbody>
</table>
please read the attached letter about the EPA VW settlement in regards to distribution. Thank you and have a great day!!

--

Chris Parr
Transportation / Operations & Maintenance Director
Jasper Co Comm Unit #1 Schools
Trans / O&M
Fax:  

April 19, 2018

Julie Armitage  
Illinois Environmental Protection Agency  
Bureau of Air  
1021 North Grand Avenue East  
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Transportation Director for Jasper County Community Unit #1 Schools, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 1,387 students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport 1,155 students per day. Our buses range in age from 2000-2018 with an average fleet age of 47. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

Recommended Changes to the Draft Beneficiary Mitigation Plan

In order to increase the cost-effectiveness of projects and stretch the state’s dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.
Our district operates 8 gasoline powered school buses, and 0 propane buses. We would appreciate the opportunity to leverage EMT funds to grow our fleet with Cleaner buses, like propane/gasoline, and nearly eliminate our student's exposure to emissions such as NOx and others that are associated with pre-2007 diesel buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest – and dirtiest – school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

[Signature]

Chris Parr
Transportation/Operations & Maintenance Director
Jasper County Community Unit # 1 Schools
As a Director for a School district, I am always looking at alternative fuels for safety and efficiency. Electric buses is a source to help achieve these goals.

Areas of concern would be the size of the vehicles for parking, the weight for the roads currently in use within our district and around our schools. The cost for recharging units and the supply, could we use solar panels to assist trickle charge during vehicle movements. Training for existing workforce, Drivers and Mechanics. Can our existing workshops and bus lifts accommodate the electric vehicles

As well as possible grants to assist in the purchase, are there grants to assist the changes within the bus garage facilities.

Electric buses could help with the education in our schools as our STEM programs grow yearly as well as being better for the safety of our students and environment.

Definitely interested but have questions before moving forward with recommendations to my Superintendent of schools
--
Thomas Bramley
Director of Transportation
CCSD15
Boone County was inequitably excluded from the draft BMP based on the usage of a political boundary (County footprint) rather than unit area (square mile). The Volkswagen Environmental Mitigation Trust Agreement states “area”. The draft BMP also references the use of “area” in the excerpts below but doesn’t properly apply area when determining Priority Area #3.

IV. ILLINOIS’ BENEFICIARY MITIGATION PLAN

Section A
Pursuant to Section 4.1 of the Trust Agreement, the BMP must:

...consider the potential beneficial impact of the selected EMAs on air quality in areas that bear a disproportionate share of the air pollution burden...

Section B
Illinois has agreed to use the Trust funds to support projects that will:

...Reduce NOx emissions in areas where the affected Volkswagen vehicles are registered while taking into consideration areas that bear a disproportionate share of the air pollution burden...

The attached document supports the inclusion of Boone County when applying the considerations using area. The draft BMP zip code figures also support Boone County’s inclusion. The last page of the attached document shows the Priority Areas with respect to area (square mile)...this graph clearly shows Boone County fits within the other draft Priority Area counties when area is considered as stated in the draft BMP and Trust Agreement.

Boone County residents and public officials have stated their support (resolution/letters from public officials are in attached document). Boone County public agencies’ aging fleet provides an opportunity to dramatically reduce NOx.

Thank you for your consideration and if you have any questions please feel free to contact me.

Justin D. Krohn, P.E.
Boone County Engineer
Date: April 11, 2018  
To: Illinois EPA - Brad Frost  
From: Boone County Engineer, Justin D. Krohn, P.E.

Technical Report & Public Input on draft Beneficiary Mitigation Plan (BMP)

The following document was assembled as a response to the public review of the VW Settlement draft Beneficiary Mitigation Plan (BMP). The documents and data strongly support the inclusion of Boone County in a Priority Area.

Included in attached report: (Note: All data referenced is from IL EPA and US Census)
- Support from Public Officials
  - Boone County Resolution 18-11
  - IL Senator Dave Syverson (35th District)
  - IL Representative Joe Sosnowski (69th District)
  - IL Representative Robert W. Pritchard (70th District)
- County square mile area Graph (shows Boone 1/3 the size of avg. Priority Area 3)
- Boone is the only county surrounded by Priority Areas that is not listed as a Priority Area
- Graph of VWs per Square Mile not in draft Priority Area
- Example of Class 8 Truck Fleet in operation with outdated emissions
- Graph of VWs per Square Mile

As shown in the attached documentation Boone County’s small footprint (about 1/3 the size of the average Priority Area 3 county) artificially precluded Boone from the draft BMP. Please review the attached documentation which fully supports Boone County as a Priority Area.

Respectfully Submitted,

Justin D. Krohn, P.E.
Boone County Engineer
Resolution 18-11

Resolution of Support from The County of Boone Requesting The Illinois Environment Protection Agency Reevaluate the draft Beneficiary Mitigation Plan (BMP) under the VW Settlement.

WHEREAS, Boone County is the ONLY Illinois County completely surrounded by Priority Areas but not listed as a Priority Area.

WHEREAS, Boone County is geographically 2.5 times smaller than the average size of the other Priority Areas which artificially negatively skews Boone County’s results in the draft selection process (VWs per county).

WHEREAS, Boone County ranks higher than the average Priority Area 3 (closer to the average Priority Area 2) when based on land area (VWs per square mile).

WHEREAS, Boone County has the 3rd highest VW concentration based on population of all Counties in all the Priority Areas (VWs per population).

WHEREAS, Boone County is 1.5 times geographically smaller and has 1.5 times more VWs than Monroe County a Priority Area 2 County.

WHEREAS, Boone County is adjacent and immediately upstream in the prevailing winds to the USEPA National Ambient Air Quality Standard (NAAQS) identified moderate non-attainment area for ozone.

WHEREAS, Boone County residents often travel and work within the non-attainment areas.

WHEREAS, Boone County is bisected by Interstate 90, a major IL interstate.

WHEREAS, Boone County Highway Department vehicle fleet consists of Class 8 Trucks with outdated emissions (some fleet vehicles greater than 30 years old).

WHEREAS, Boone County supports efforts to reduce emissions.
PASSED, APPROVED, AND ADOPTED by the County Board of Boone County, State of Illinois,

this ___ day of March, 20__.

Karl Johnson, Chairman
Boone County Board

ATTEST:

Julie A. Stapler
Boone County Clerk

Ayes: ___ Nays: ___ Absent: ___ Abstain: ___ Voice Vote: ___
April 2, 2018

To Whom It May Concern:

RE: Inclusion of Boone County in the VW BMP

As an Illinois State Senator representing the 35th District, I fully support Resolution 18-11 passed by the Boone County Board on March 21, 2018 requesting the reconsideration of the draft Beneficiary Mitigation Plan (BMP) to include Boone County under the VW Settlement. The Illinois Environmental Protection Agency should reevaluate Boone County’s conditions independently of its geographic size as they relate to the draft Priority Areas.

Boone County’s small geographic size inequitably excluded them from the draft Priority List of Counties, however, if the Beneficiary Mitigation Plan were to also consider impacted VWs per unit population, Boone County would be the 3rd highest ranking among the 16 Priority Area Counties. Boone County would also rank above average on most other attributes related to the VW impacts and is surrounded by previously identified Priority Areas.

We look forward to application of the $108 million settlement to improve the quality of life for Illinois residents and fully believe Boone County exceeds the criteria to participate in this plan.

Thank you in advance for your consideration of this request. Please feel free to contact my office with questions or for additional information.

Sincerely,

SENATOR DAVE SYVERSON
Deputy Republican Leader

DS:cl
April 4, 2018

JOE SOSNOWSKI
STATE REPRESENTATIVE
69TH DISTRICT

To Whom It May Concern,

I am pleased to support Boone County’s Resolution 18-11 requesting a reevaluation of the Beneficiary Mitigation Plan (BMP). Therefore, I respectfully encourage the Illinois Environmental Protection Agency to reconsider the current plan and include Boone County within the plan’s future VW Settlement priority areas.

The counties identified as the agency’s Priority Areas have inadvertently omitted to consider that Boone County has the 3rd highest VW population concentration when compared to the identified priority counties in the BMP. For example, Boone County is 1.5 times smaller and has 1.5 times more VWs than Monroe County, which is labeled a Priority Area 2 County. Furthermore, Boone County is an active transportation hub for residential and work commerce due to its proximity to Interstate 90. In addition, inclusion within the BMP will aid Boone County in its efforts to reduce emissions from its own aging fleet of Public Work vehicles.

I am extremely proud of Boone County’s efforts to improve the environment and quality of life for its residents. The evidence demonstrates that Boone County is a qualified candidate for this plan; therefore I offer my full support and cooperation in their endeavors seeking reconsideration from your agency to more equitable redistribute the $108 million in available funds.

Thank you in advance for your time and consideration of this request. If you have any questions or concerns please feel free to contact my district office at (815) 547-3436.

Sincerely,

Joe Sosnowski
State Representative
69th District

My recommendation for Boone County is premised on total and complete compliance with State and Federal law, relevant case law, and agency procedures. Nothing in this recommendation is intended to circumvent such laws and procedures.
March 29, 2018

Greetings:

I write to strongly urge the Illinois Environmental Protection Agency to withdraw its draft Beneficiary Mitigation Plan for the administration of funds under the Volkswagen Environmental Mitigation Settlement and seek public comment for a new plan. In complete contrast to the open and transparent public hearings conducted by other involved states, Illinois EPA has proceeded in a closed process with limited public input or involvement of all interested parties.

The $108.7 million settlement for Illinois provides an excellent opportunity to maximize reduction of harmful exhaust emissions and improve our state's air quality. While there are many classifications of eligible alternative vehicles under the terms of the settlement plan, IEPA decided that 65 percent of Illinois' total award will go to Chicago Metra to replace old locomotives. The next highest state plan for allocation of funds for off-road locomotives is Ohio's, at just 20%.

IEPA also decided that only 16 counties in the state will receive any money from the settlement, and far less is going to alternative vehicle technologies than the vast majority of other states. The allocation of funds under the IEPA plan sets arbitrary criteria which limits the number of target counties. An example of this arbitrary decision is the elimination of Boone County while it is surrounded by counties included in the plan. Boone County is geographically a small county yet its impact density (VW per square mile) is equal or greater than many of the proposed Priority Area counties. In addition it has the 3rd highest concentration of VW vehicles per resident compared with priority area counties and it is bisected by I-90 with its large vehicular traffic impacting air quality.

Thank you for your consideration of my comments. Please feel free to contact my office with any questions or for further information.

Sincerely,

Robert W. Pritchard
Boone County – the only county completely surrounded by draft Priority Areas but not identified as a Priority Area.
VW / SQ MILE (not in draft Priority Areas)
Boone County Highway Department: Class 8 Diesel Fleet Truck (32 years old)
Many local agency Class 8 Diesel Fleet Trucks with outdated emissions
VW / SQ MILE (excluding DuPage, Cook & Lake)

Boone County
Priority Area 1
Priority Area 2
To whom it may concern,

The Village of Glendale Heights would like the committee to consider using vouchers as well as possibly consider a portion of the fund for small EV projects. It seems municipal projects have not been considered as part of the mitigation process.

Respectfully,

Rudy Haverkamp  
Fleets Division

Village of Glendale Heights  
Public Works Department

Telephone:  
Fax:  
Email:
From: Mike Saxton
Sent: Sunday, April 01, 2018 6:37 PM
To: Frost, Brad <brad.frost@illinois.gov>; Mohr, Kent <kent.mohr@illinois.gov>
Cc: Larry Brasfield; Julie Brooks
Subject: [External] FW: Orange EV - VW Projects USE THIS ONE
Importance: High

Please use this version. I've attached the correct files this time.

Mike

From: Mike Saxton
Sent: Friday, March 30, 2018 5:13 PM
To: 'Mohr, Kent' <kent.mohr@illinois.gov>; 'brad.frost@illinois.gov'
Cc: 'Julie Brooks' <brad.frost@illinois.gov>; 'Larry Brasfield'
Subject: Orange EV - VW Projects
Importance: High

Hello gentlemen,

Please see the attached projects shared to help illustrate the variety of sites and fleets that would be excited to repower /replace existing diesels with Orange EV’s pure electric terminal trucks. These examples would deploy trucks to:

- area manufacturing operations
- 3rd party logistics sites
- rail intermodal yard operations (for this I’ve reused data already gathered a FL site example; the Chicago operations with which we’re working are twice the # hours at 2-2.5 GPH).

Illinois was the first state ever to deploy all electric class 8 trucks, Orange EV pure electric terminal trucks. Fleet are primed and ready to deploy more all electric trucks using VW.

Thanks for your consideration.
Respectfully,

Mike Saxton, Chief Commercial Officer
ORANGE EV, Pure Electric Terminal Trucks
"Spend 90% Less in Fuel to Haul the Same Load with No Diesel and No Emissions"

Website: www.OrangeEV.com

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March 30, 2018

**SUBJ: Illinois Projects to Replace Class 8 Diesel Trucks with Electric**

To whom it may concern:

Firefly Transportation Services LLC. is currently pursuing a business partnership with DSC Logistics, Inc. to provide them with Spotting service at their Des Plaines, IL location located at 1750 S. Wolf Road. The service would entail providing one (1) class 8 terminal tractor and the labor to service their yard management needs. Currently, the terminal tractor is in service 80 hours per week and they see that service increasing in the near future.

The plan is to pilot an EV piece of equipment at this location and if proven to be successful then undergo a bid process for 7 additional sites in IL located at: Carol Stream 60188, Champaign 61821, Elwood 60421, Joliet 60431, Minooka 60447, Romeoville 60446, and University Park 60484.

Currently, this potential client has in operation 14 diesel powered class 8 vehicles across the 8 sites listed above and we’re proposing we will replace with EV equipment. Firefly could assume ownership and then repower | replace.

Firefly TS has been strategically partnering with Orange EV out of Kansas City, MO to spec and price equipment for our operations. We’re currently at the last phase of a project with a major CPG company to place one (1) EV terminal tractor in CA and one (1) EV terminal tractor in MI. With Orange EV’s assistance we’ve reached out to the appropriate offices to apply for subsidies to help fund our ability to replace diesel powered equipment with EV.

Our hope and intent is to leverage any/all funding available within the state of IL to help us move our pilot forward with DSC Logistics. Please contact me with any questions. You may also contact Kyle Mohn of DSC at [kyle.mohn@dscl.com](mailto:kyle.mohn@dscl.com) and [800.909.1144](tel:800.909.1144).

Best Regards,

Keith Archer
Principle Partner
Kent Mohr
Acting Manager
Bureau of Air, Vehicle Emissions Testing Program
Illinois Environmental Protection Agency

Subject: Class 8 Electric Truck Illustrative Project for use of IL VW Mitigation Funds – Manufacturing

Kent,

This letter illustrates a project to deploy 100% electric, Class 8 trucks, specifically electric terminal trucks, into spotting services at a manufacturing facility. With the hope to secure VW funds to help them, a spotting services company has allowed us to share current fleet information (i.e. truck, engine, and usage data) along with quotes for the Orange EV trucks that would replace their diesels at a Chicago-area site. We’ll refer to this Orange EV contact as “the Fleet.”

Orange EV manufactures the first - and still only - commercially deployed Class 8, 100%-electric vehicles. With trucks deployed since 2015, Orange EV now has Class 8 terminal trucks operating in container-handling fleets from California to New York. From these deployments we have gathered a wealth of experience and data, as well as more fleets now willing to replace even more diesel trucks with pure electric.

Accelerating the deployment of new technology, however, requires incentive funding to offset higher up-front capital costs and perceived risks of newer technologies. Volkswagen funds provide the opportunity for the Fleet to deploy 100% electric Class 8 vehicles in Illinois. As you develop the Illinois Volkswagen Beneficiary Mitigation Plan, please consider the cost-effective emissions reductions that this project will deliver.

The information shared here illustrates a potential project. Prior to order/contracting of whatever assistance is offered by Illinois, the Fleet will conduct a business case review to ensure that the final form of the project (including incentives) will meet internal investment hurdles. Project information is shared in five sections:

- Terminal Truck Background Information
- Illustrative Project Details
- Estimated Emissions Reductions
- Project Costs – Per Truck
- Project Benefits

Orange EV truck and charging equipment quotes are also attached.
Terminal Truck Background Information

In this letter, the terms "terminal truck" and "yard truck" are used to describe this truck replacement project. Both terms refer to the same type of vehicle, which is known by many other names including: UTR, hostler, spotter, shifter, shunt, yard dog, goat, mule, jockey, tug, tractor, and more. The term "drayage truck" can also be used, though less so since drayage most often refers to short distance over-the-road hauling. Depending on the operation, however, Orange EV terminal trucks do drayage work and meet this definition.

Terminal trucks are heavy duty, Class 8 vehicles used to move cargo trailers at lower speeds, typically within the confines of container handling facilities in the business of manufacturing, retail distribution, railroad inter-modal transfer, LTL freight, waste management, and more. While they can be DOT-compliant and operate on-road/on-highway, the dominant use is off-road and un-plated within yards at low speeds, typically under 25mph and often in 24x7 operations. As a result, yard trucks have high engine hours and often significant idle time, but lower annual mileage than high-speed semis.

Terminal trucks should be eligible for incentives as both on-road (DOT-compliant and on-highway) and off-road (non-plated and off-highway) with NOx reductions demonstrated through either mileage-based or hours-based methods. Historically, many incentive programs put mileage or plating restrictions on Class 8 trucks thinking only of the high-speed tractors, though low-speed yard trucks are heavy polluters.

Orange EV’s terminal truck is a Class 8 freight-hauler with GVWR of 40,900 lbs. There’s no question terminal trucks should be eligible for Volkswagen funding under Appendix D-2, Category 1 of the Volkswagen Consent Decree. In this category, if dump trucks are eligible, certainly terminal trucks should be as well.

Category 8 of the VW Consent Decree specifically identifies terminal tractors, yard hostlers, and yard tractors as eligible, but those that “operate within ports”. Using the word "port" is potentially limiting since it evokes the image of a traditional seaport, which would eliminate approximately 80% of yard truck operations.

The Consent Decree does not define the word port, however, which gives states flexibility. To ensure that all Class 8 yard truck projects are eligible for consideration for VW Mitigation funds, Illinois could adopt a broad definition of port, such as “For purposes of this Volkswagen Beneficiary Mitigation Plan, the term "port" connotes a hub or node in the goods movement supply chain with freight activity that facilitates the distribution of goods by any mode of transportation across marine, air, rail and truck."
Illustrative Project Details

The Fleet is a spotting services company. This project will focus on 9 diesel yard trucks currently operating at a Chicago-area manufacturing facility, 8 of which are running nearly 24x7.

**Timeline to Deploy:** The Fleet could apply for VW funds in the first round offering, anticipated this summer, and deploy as soon as possible under the VW grant timeline.

**Owner/Operator Relationship:** The Fleet owns the yard trucks and is contracted to operate them at a manufacturing facility. The Fleet would pay for trucks and chargers. The site would pay for infrastructure costs.

**Fleet Truck and Engine Data:** The Fleet has indicated interest in replacing some portion of the diesel terminal trucks listed below with Orange EV T-Series pure electric terminal trucks.

### Fleet Truck and Engine Data

<table>
<thead>
<tr>
<th>Site Name</th>
<th>DOT/ Offroad</th>
<th>Truck Make</th>
<th>Model</th>
<th>Truck Year</th>
<th>Truck ID#</th>
<th>Engine Serial #</th>
<th>Engine Make</th>
<th>Engine Model</th>
<th>Engine Model Year</th>
<th>HP</th>
<th>Displacement (Liters)</th>
<th>Diesel Fuel (gal / year)</th>
<th>Engine Hours (hrs / year)</th>
<th>Idle Time (hrs / year)</th>
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</thead>
<tbody>
<tr>
<td>Example</td>
<td>NonRoad</td>
<td>Kalmar</td>
<td>Ottawa</td>
<td>2004</td>
<td>1001</td>
<td>46445331</td>
<td>Cummins</td>
<td>QSB-5.9</td>
<td>2004</td>
<td>173</td>
<td>5.9</td>
<td>13,049</td>
<td>5,300</td>
<td>623</td>
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<td>45874</td>
<td>NonRoad</td>
<td>Capacity</td>
<td>Terminal Truck</td>
<td>1997</td>
<td>O09625</td>
<td>45415698</td>
<td>Cummins</td>
<td>5.9B</td>
<td>1996</td>
<td>210</td>
<td>5.9</td>
<td>9000</td>
<td>6000</td>
<td>1800</td>
</tr>
<tr>
<td>46799</td>
<td>NonRoad</td>
<td>Capacity</td>
<td>Terminal Truck</td>
<td>1997</td>
<td>O09623</td>
<td>46456889</td>
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<td>5.9B</td>
<td>1996</td>
<td>175</td>
<td>5.9</td>
<td>9000</td>
<td>6000</td>
<td>1800</td>
</tr>
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<td>Cummins</td>
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<td>6000</td>
<td>1800</td>
</tr>
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<td>Cummins</td>
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<td>6000</td>
<td>1800</td>
</tr>
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<td>46261838</td>
<td>Cummins</td>
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<td>2002</td>
<td>174</td>
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<td>6000</td>
<td>1800</td>
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<tr>
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<td>Cummins</td>
<td>ISB 5.9</td>
<td>2002</td>
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<td>1800</td>
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<td>317877</td>
<td>46762241</td>
<td>Cummins</td>
<td>ISB07</td>
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<td>200</td>
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<td>6000</td>
<td>1800</td>
</tr>
<tr>
<td>46018</td>
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<td>Terminal Truck</td>
<td>1997</td>
<td>76132</td>
<td>45528810</td>
<td>Cummins</td>
<td>C8.3</td>
<td>1997</td>
<td>215</td>
<td>8.3</td>
<td>9000</td>
<td>6000</td>
<td>1800</td>
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<td>Terminal Truck</td>
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<td>311820</td>
<td>46505100</td>
<td>Cummins</td>
<td>5.9B</td>
<td>2005</td>
<td>173</td>
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<td>9000</td>
<td>6000</td>
<td>1800</td>
</tr>
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<td>Terminal Truck</td>
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<td>313003</td>
<td>46549994</td>
<td>Cummins</td>
<td>ISB 245</td>
<td>2005</td>
<td>245</td>
<td>5.9</td>
<td>9000</td>
<td>6000</td>
<td>1800</td>
</tr>
</tbody>
</table>

The usage is estimated. Actual figures vary across the truck fleet and often not available since trucks, fuel and the resulting economics are managed on a fleet or site basis. Assumes 1.5 GPH diesel and 30% idle time.
Estimated Emission Reductions

Average trucks could eliminate an estimated 1.0 ton NOx annually with heaviest used trucks at the site more than twice. Real world emissions may be significantly higher, though, according to a 2017 Wells to Wheels analysis ("Environmental implications of natural gas as a transportation fuel", Hao Cai et al).

In the Wells to Wheels analysis, multiple studies found that performance of a diesel’s selective catalytic reduction (SCR) system is highly dependent on the duty cycle. In high-speed duty cycles, the SCR system performs well and diesel trucks have relatively low NOx emissions. In duty cycles with significant idling, low speeds, or low loads, however, diesel engine temperatures do not reach levels that support sustained SCR performance resulting in very high NOx emissions.

Therefore, since diesel yard trucks typically operate 5 to 15 mph, they likely emit far more NOx than currently estimated, along with other criteria pollutants, even when equipped with the latest emission control equipment.

Project Costs – Per Truck (worst case scenario)

<table>
<thead>
<tr>
<th>Item</th>
<th>NEW, Fast Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orange EV Extended Duty T-Series Terminal Truck with Trailer Stops</strong> (see attached sample quote)</td>
<td>$284,950</td>
</tr>
<tr>
<td>• Note that if trucks are deployed using Standard Onboard Charging, the charging cost is included in this base truck cost. For these trucks, the additional cost for a Fast Charge Cabinet (below) would not apply</td>
<td></td>
</tr>
<tr>
<td><strong>Orange EV Fast Charge Cabinet (FCC)</strong> (see attached sample quote)</td>
<td>$59,950</td>
</tr>
<tr>
<td>• Trucks may be deployed with one FCC supporting multiple trucks. I some instances they can be deployed in a 1:1 ratio.</td>
<td></td>
</tr>
<tr>
<td><strong>Electrical Infrastructure</strong></td>
<td>$20,000</td>
</tr>
<tr>
<td>• Variable by site and to be confirmed with quotes from site electrician. Typically less for standard onboard charging.</td>
<td></td>
</tr>
<tr>
<td>• $20,000 assumed where one FCC serves two or three trucks.</td>
<td></td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
<td>$2,500</td>
</tr>
<tr>
<td>• Fleets pay shipping of trucks from Kansas City to destination, usually via contracted 3rd party. Costs are variable by destination and seasonality.</td>
<td></td>
</tr>
<tr>
<td><strong>Sales Tax</strong></td>
<td>$30,000</td>
</tr>
<tr>
<td>• Varies by state.</td>
<td></td>
</tr>
<tr>
<td><strong>Total per truck cost before VW reimbursement:</strong></td>
<td>≈$397,400</td>
</tr>
<tr>
<td><strong>Less 75% VW reimbursement:</strong></td>
<td>-$298,050</td>
</tr>
<tr>
<td><strong>Final per truck cost to Fleet:</strong></td>
<td>$99,350</td>
</tr>
</tbody>
</table>
New diesel trucks purchased in volumes (as this Fleet does) can cost less than the $99,350 shown in the scenario above. Given that in most cases fleets are not looking to buy a new Tier 4 diesel, but rather a) extend the life of a current truck or b) buy a refurbished vehicle that meets emission standards, the Fleet will be paying a premium over diesel, even at 75% reimbursement. Also, without having already deployed their own electric trucks, most fleets perceive a risk premium that in effect increases their perceived worst-case total project costs even further. Offering the maximum 75% reimbursement increases the likelihood that the Fleet will replace diesels with zero emission vehicles, thereby accelerating widespread adoption and making significant gains towards statewide emission reductions targets.

**Project Benefits**

Electric yard truck projects like this one achieve state VW Mitigation Plan goals in that they:

- Remove some of the heaviest-polluting diesel trucks
- Adopt the cleanest technology (i.e. zero emission electric)
- Permanently remove 100% of the previous diesel emissions
- Significantly improve air quality in impacted areas, while
- Bringing clean tech jobs to Illinois

In addition, when the Fleet deploys and shares its success with Orange EV electric terminal trucks, other fleets will know significant vetting has occurred. Successful deployments generate interest in a way that overcomes pre-conceived notions, encouraging fleets to deploy faster than they than they otherwise might have. This ripple effect further improves the project’s cost effectiveness.

After your review of this exciting project, we’d appreciate the opportunity to answer questions. The Fleet can be available to discuss details.

Thank you for your consideration and partnership in the mission to deploy emission-free technologies.

Respectfully,

Mike Saxton
Orange EV, Chief Commercial Officer

OrangeEV.com 500 NW Business Park Lane, Riverside, MO 64150 866-688-5223
I'm concerned that your targeted reduction in emissions doesn't take into account the increased exposure to emissions from people being close to sources. While you may be able to reduce more emissions from locomotives, more people are exposed to emissions from buses.

As an avid cyclist who lives across the street from the extremely busy BNSF/UP, I can say that the emissions from a bus are more noticeable and impactful to me than those from locomotives.

To that end, I would like to see the Chicago Transit Authority (CTA) and Chicago Public Schools (CPS) engage with the EPA to greatly increase the number of electric buses. Perhaps even increasing the allotted money available to transit authorities.
Please find attached the Illinois Propane Gas Association’s comments in regards to the Illinois Environmental Protection Agency’s draft Volkswagen Beneficial Mitigation Plan.

Respectfully,

Aaron DeWeese, Executive Director
Illinois Propane Gas Association
Illinois Propane Gas Association Volkswagen Settlement Comments
April 19, 2017

The Illinois Propane Gas Association, IPGA, represents 211 companies, located in 455 locations across the entire state of Illinois. IPGA is an active member of Chicago Area Clean Cities and is a founding member of the Illinois Alternative Fuels Alliance.

For the record, propane autogas is a federally classified alternative fuel, that significantly reduces vehicle NOx emissions compared to gasoline or diesel. Many propane alternative fuel vehicle classifications, including Class C School Buses, are included in the Volkswagen Environmental Mitigation Settlement.

IPGA first contacted designated IEPA VW Settlement point person, Brad Frost, over six months ago. At that time, IPGA submitted a proposal for propane-powered Class C school buses, an approved alternative fuel fleet vehicle classification under the terms of the Volkswagen Mitigation Plan.

On February 21st, the day IEPA first posted its draft plan, IPGA was surprised to discover the Agency had arbitrarily carved out close to $11M for electric school buses.

Prior to submitting its draft plan, if the Agency had met with school bus industry officials, other than presumably Canadian-based Lion Electric, the agency would have been aware that there are currently more than 800 propane school buses on the road in school districts across the state, including Chicagoland and many struggling rural school districts. Propane school buses have established a real market niche in Illinois, both with private fleets and public-school fleets.

Propane school buses are reducing significant amounts of NOx emissions every school day in the transportation of Illinois students.
Nationally, 750 school transportation fleets, including Boston and Indianapolis, currently operate 10,000 plus propane school buses, and all major school bus manufactures have commercially available Class C propane school bus models.

According to Argonne National Laboratory analysis comparing NOx emission reductions across all commercially available Class C school buses, propane school buses represent the most cost-effective NOx emissions reduction option in class.

<table>
<thead>
<tr>
<th>School Bus Type</th>
<th>Annual NOx Emission (lbs)</th>
<th>Unit Price</th>
<th>Corridor NOx Emission Reduction</th>
<th>Propane vs. Other School Buses</th>
<th>Infrastructure Cost</th>
<th>Illinois Buses in Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane (LPG)</td>
<td>912 lbs.</td>
<td>$93,000</td>
<td>$102</td>
<td>Most cost effective</td>
<td>$5,000 - $75,000</td>
<td>Over 800***</td>
</tr>
<tr>
<td>CNG</td>
<td>837 lbs.</td>
<td>$125,000</td>
<td>$149</td>
<td>32% more cost effective than CNG</td>
<td>Upwards of $1,000,000</td>
<td>None</td>
</tr>
<tr>
<td>Electric</td>
<td>1,137 lbs.</td>
<td>$350,000</td>
<td>$308</td>
<td>67% more cost effective than Electric</td>
<td>Upwards of $1,000,000</td>
<td>None**</td>
</tr>
<tr>
<td>New Diesel</td>
<td>86 lbs.</td>
<td>$90,000</td>
<td>$991</td>
<td>90% more cost effective than Diesel</td>
<td>NA</td>
<td>15,000*</td>
</tr>
</tbody>
</table>

*Data from Argonne National Laboratory 2017 AFLEET Calculator*

*Total combined old and new diesel school buses*

**Less than 300 total electric school buses currently on the road in the United States*

***Over 10,000 total propane school buses currently on the road in the United States***

In fact, if Illinois was to replace all its 9,799 old diesel school buses currently on the road with propane school buses, we could reduce 3.6 million pounds of NOx emissions per year across our state.

Under the terms of the Volkswagen Environmental Mitigation Settlement, public school districts which own their school bus fleets, are eligible for up to 100% of school bus replacement unit costs, while private bus fleets are eligible for up to 50%.

The fact is, in the Chicagoland market and in many other school districts across the state, the vast majority of school bus fleets are private, not public.
So let’s do the math as it pertains to the logistics of the Agency’s draft plan electric school bus allocation:

The average unit cost per electric school bus is $350,000.

The average unit cost per propane school bus is $93,000;

So, $10.9M divided by $350,000 per electric school bus, buys 31 buses for public school bus fleets (at 100% funding), or 62 buses for private fleets (at a 50% match).

That is a pilot program at best; and when you add $1 million per required charger, as well as charging time logistical challenges to the equation, it is very doubtful the electric school bus allocation will find any takers in the Illinois market.

In comparison, that same $10.9M buys 117 propane school buses for public fleets, or 234 propane school buses for private fleets.

The Illinois Propane Gas Association is recommending the Agency’s final plan provides for 1/3 of the cost of each propane school bus.

That would put 352 propane school buses on the road. IPGA knows from industry feedback, many private school bus companies would jump at the opportunity to replace their aging diesel school bus fleets with much cleaner propane school buses if offered IPGA’s proposed allocation. Now that’s moving the needle in a significant way, and greatly reducing NOx emissions around our student population today.

IPGA has been informed the IEPA has finally agreed to sit down with school bus industry officials to hopefully gain some real-world market analysis regarding the true potential efficacy of school bus replacement in our state. IPGA encourage this dialog.

IPGA would also like to address IEPA’s draft BMP priority zones. IEPA’s draft BMP places a lot of emphasis on environmental justice in determining its priority zones. Under the Agency’s plan, 17 counties are designated as priority zones. However, 13 counties with coal and nuclear power plants are omitted from the Agency’s plan; 13 counties, which shoulder the environmental burden of supplying electric power to our state, are shut out of priority funding under the IEPA plan.

And what about the rest of the state? 82 counties our shut of the plan. That’s 82 counties with struggle school districts in need of new school buses, that under the IEPA draft BMP, would not be eligible for priority funding.

The IEPA’s plan falls short of genuine, truthful environmental justice.
And finally, the Illinois Propane Gas Association is more than skeptical IEPA will honor any propane autogas commercial fleet or school bus grant applications. In recent years, the once thriving IEPA Alternative Fuels Green Fleet Rebate program has been eliminated. The Agency has officially stated there is no longer a need for the program. IPGA strongly disagrees, and according to industry officials, the elimination of the state program has had a significant negative impact on the market.

And yet, by statute, the state still collects an annual fee on every commercial fleet vehicle, and according to current Comptroller reports, the Alternative Fuels Fund (422) has a $1,660,855 balance and has actually grown in FY18. Yet, IEPA, in its introduced budget, has zeroed out the line item appropriation for FY18-19 budget. Quite frankly, in recent years, IEPA has shown zero support for the propane alternative fuel vehicle market.

IPGA and its members encourage IEPA to include funding for propane autogas alternative fuel vehicle projects, especially for Class C School Buses in its final BMP. Furthermore, IPGA encourages IEPA to restore appropriation funding for the Agency's Alternative Fuel Vehicle Rebate Program and resume issuing grants for propane alternative fuel vehicles.
To: Illinois EPA  
Re: VW Settlement Public Comments

River Trails School District 26 is a Pre-K-8 district located in Mount Prospect, IL. We approximately 1500 students and approximately 400 staff members across 4 schools.

River Trails has, over the past several years, increased our efforts to include "green" and sustainable issues into our STEM curriculum. Our schools have all been awarded the Illinois Green Ribbon Schools Award and the USDA Healthier US School Challenge Award. Our middle school has received the US Dept of Education 2015 Green Ribbon Award. In addition, all three of our schools are Energy Star certified.

We currently contract our transportation service with Grand Prairie Transit. We run 10 busses on a daily basis throughout our district. 9 of these busses run on bio-diesel fuel, and 1 is diesel/electric hybrid. We would like to be able to reduce the number of busses in our fleet that run on fossil fuel and increase the number of electric or hybrid busses.

Increasing the number of electric busses in our fleet would help in a number of areas:

- When our busses need to idle for any length of time, using electric busses will reduce the fumes emitted. The National Institutes of Health have identified exposure to diesel exhaust particles as a contributing factor in the childhood asthma. Any efforts we can make towards reducing this exposure is a positive for our students, families and staff.
- Electric busses are quieter than diesel busses. Since our bus routes run through exclusively residential neighborhoods, we can lower the amount of noise we expose our residents to.
- River Trails District 26 participates in a community-wide Green Schools Committee. Its mission is to lead the way in promoting environmental sustainability within our community and schools.
- Operating electric busses reduces the need for fossil fuel (diesel), and the associated expulsion of exhaust fumes and particles into the environment - thereby reducing the impact on the ozone layer.

Finally, it is our understanding that the IEPA may ask for applications for the first round of funds early this spring/summer. The purchase of these busses for a school district may be done directly by the district, or by the contracted transit company and leased back to the school district. In either situation, there needs to be sufficient time allotted to approach potential partners in the purchase and lead time for the purchase to be completed.
Jane Holtz
Administrative Assistant for Business Services/Operations and Maintenance
River Trails District 26

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Hello

I have attached the thoughts of the MFMA to this email.

Thank you

Ken Crowley CPFP
Superintendent of Fleet Services
Village of Oak Park

www.oak-park.us
The Illinois draft Beneficiary Mitigation Plan (BMP) plan should have benefitted from input from a diverse array of informed stakeholders who can contribute to the successful mitigation of VW’s unlawful emissions in Illinois.

Other states began public engagement in late 2016 and throughout 2017. Illinois did not have a clear public engagement strategy prior to the release of the draft BMP in March 2108. Illinois is now upon the deadline to submit its draft BMP and it appears that funding allocations and expected outcomes are not optimized this draft plan. Therefore, a strong BMP that establishes clear, achievable, sensible and fair Eligible Mitigation Action (EMA) priorities that most benefit all impacted residents of Illinois, should be submitted by IEPA in a timely manner. Valuable stakeholder input should be formalized through a stakeholder advisory group that designs an effective grant/incentive program to implement the Illinois VW BMP. Such a stakeholder advisory group should also provide ongoing oversight of this grant/incentive program to allow for equitable and effective disbursement of Illinois VW Trust Funds in Illinois.

To shape this critical Illinois’ BMP we offer the following comments and recommendations:

1. Rationale behind proposed allocations

A. Broaden emissions reduction targets
Emissions targets in the draft BMP are fixed on Nitrogen Oxide (NOx) emissions, yet this should not be the exclusive focus of EMA’s in the final plan. The VW settlement offers an unprecedented opportunity to drive more sustainable fuel solutions, while handily meeting NOx reduction goals. NOx generated from the 23,600 non-compliant VW’s can be offset and other pollutants (Carbon Monoxide (CO), Hydrocarbons (HC), Particulate Matter (PM), etc.) and greenhouse gas emissions (GHGs) can and should also be reduced. Reducing GHG is an important concern among public agencies, and especially among the 85 communities in the non-attainment area that have formally supported the consensus sustainability goals of the Greenest Region Compact. Broadly addressing emission targets for long-term public health benefits is the most effective way to leverage VW Trust funding.
It is expected with implementation of proposed non-road EMA’s, that a diesel engine will be swapped for another diesel engine or repowered to reduce NOx emissions. However, this practice does little to reduce GHG emissions. These new or effectively new engines will have an expected life span of 30 or more years for locomotives and 15 or more years for trucks. Unless the cleanest solutions within the EMAs are optimized, the opportunity to reduce greenhouse gases will be lost for these vehicles for a generation, or more. There is arguably a more urgent need for reduction of GHGs than NOx, and this VW Trust funding can, and should do both.

B. Focus on contributing emissions sources
Diesel vehicles are responsible for 29% of NOx emissions in Cook County, compared to only 3% of NOx emissions contributed by locomotives. The proposed allocation of 65% for non-road, which is understood to be predominantly locomotives, is not appropriately balanced to address NOx sources. Significantly greater allocation is needed to mitigate NOx contributions from diesel vehicles. The data source for the NOx Emission Inventor for Non-Attainment Criteria Pollutants is the Illinois Environmental Protection Agency’s Emissions Inventories, 2008 and Chicago Department of Environment, May 2010. While this available data is limited to Cook County, it represents a substantial proportion of the targeted region in the northeast non-attainment area.

C. Be transparent and consistent with assumptions
The amount of NOx produced by engines varies based on the parameters highlighted below (Item 2A). As these parameters influence the assumed NOx production, and therefore justification for funding allocations, the assumptions applied should be clearly provided by the IEPA in the final BMP. The draft BMP reports NOx reduction for on-road EMA’s @100 tons per year vs. non-road EMA’s @1700 TPY, which were ostensibly, derived using the suggested DEQ or AFLEET tools. Based on cursory analyses using AFLEET, these NOx reductions seem to make assumptions that favor the non-road, compared to the on road. These assumptions also do not openly account for other pollution and GHGs and the costs to achieve these conversions. Assumptions for calculating expected results, and therefore allocations for all EMA’s must be consistently applied and openly disclosed.

2. Interpret the Consent Decree
The Consent Decree allows some latitude to IEPA (the Beneficiary) to interpret the parameters of the EMA’s to best enable eligible VW Fund applicants (public and private fleet managers, industry and other stakeholders) to deliver results for Illinois.
A. Define EMA’s by performance, not vehicle type
NOx reduction is a function of:
1) engine horsepower
2) operating hours
3) duty cycle
4) amount of fuel consumed
5) age of the engine being displaced/repowered
6) type of engine, fuel, and after-treatment being employed in the solution and
7) whether the change relates to locomotives vs. truck engines, which have different emission standards, and the emission standards that are being applied (e.g. Tier 0 vs. Tier 4).

NOx production is not generally related to whether the vehicle is used for freight hauling, construction, snow plowing, people-moving, fire-fighting, etc. The engine is the source of emissions. IEPA’s proposed interpretation of Class 4 to 8 should not determine if a vehicle is eligible or ineligible because it travels the interstate to deliver goods, mixes concrete, or provides services to the public, including protecting the public’s health and safety.

B. Consent Decree Definitions
The Consent Decree (Appendix D-1, Definitions) indicates what is included, by way of example, but does not explicitly exclude certain types of vehicles. The Consent Decree allows, EMA-6 “Class 4-7 Local Freight Trucks (Medium Trucks)” and EMA-1 “Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)” which should be interpreted to include vehicles that meet the performance definition and serve priority populations, identified in the draft BMP. This should include emergency-response vehicles and all public service vehicles in these vehicle classes. Strictly interpreting “freight” trucks might exclude public sector fleets that directly impact target populations.

The Consent Decree, Appendix D-1, defines eligible vehicles are model years 1992 to 2006, unless the Beneficiary provides additionally for model years 2007 through 2012. If these newer models are to be included it must be made clear in Illinois’ final BMP.

3. EMA Allocations

A. Reduce proposed allocations
The draft BMP proposed allocation of 65% for non-road applications (notably locomotion), 10% for electric buses and only 20% for all included public and private trucks (Class 4 to 8) overly favors non-road applications. Allocations in the final Illinois BMP should be substantiated based on issues raised above.

To be clear, the proposed allocation 65% for non-road is excessive. This is out-of-line with non-road allocations made by other states and fails to focus benefits on the target populations in Illinois. Further, US DOT has historically provided and currently provides CMAQ funds to
subsidize cleaner locomotives. Reallocating VW funds more appropriately to diesel vehicles, Class 4-8 better serves IEPA’s stated BMP objective to “maximize and leverage funding”.

Further, the cost assumptions for the reduction in NOx for non-road and on road are not stated yet are very important to decision-making. The cost to make a single locomotive Tier 4 from Tier 0 can cost between $2.5 and 7 million each, depending on whether a new engine or a repowered engine is applied and whether an alternative fuel to diesel is applied. Typical costs to change a truck to cleaner vehicles range from $20,000 to $100,000, depending on a range of factors. For the low end of the truck range ($20,000), this translates into 125 to 350 trucks for every locomotive, from a grant funding perspective.

The proposed allocation of 10% for all electric school buses is not substantiated by performance or cost-effectiveness. According to IEPA’s own website, electric school bus engines are shown to have the lowest potential emissions reductions of all EMA’s. While the BMP estimates performance outcomes for both on-road projects (100 tons NOx/year) and off-road projects of 1,700 tons NOx/year), there is no estimate provided for the reduction potential for conversion to all electric school buses. From proposed allocations, cost per ton of NOx reduced can be estimated for on-road projects (EMA 1, 2 and 6) at 0.217 $/MM/ton; and non-road projects (EMA 3 and 4) at 0.042 $/MM ton. This comparison cannot be calculated for all electric school buses and this proposed carve-out is unsubstantiated based on the goal of NOx reduction.

**B. Establish a public-sector allocation**

A more equitable and effective carve-out should also include public transit buses and public Class 4-8 trucks which show greater potential for emissions reduction than school buses. This allocation category should include all public-sector vehicles, Class 4-8, including public transit and school buses should total 30% and should allow applicants to determine the optimal clean fuel choice for their use.

**C. Use DERA funds**

As stated, under EMA 10, Diesel Emission Reduction Act (DERA) funds may be leveraged for replacement or repower of passenger locomotives. This same process should be applied to truck engines within the DERA definitions for eligible Class 4 through 8 vehicles. This would leverage matching DERA funding to allow more public fleets to participate in the greening of their fleets.

**4. Invest in Municipal Fleets**

It is important to prioritize municipalities as beneficiaries of VW mitigation funds for many reasons. Public fleets provide visible and essential public services to residents equitably throughout the non-attainment area, and specifically within target areas of VW ownership and environmental justice priorities. Investment in cleaner municipal fleets provides demonstrable localized benefits. Municipalities are trusted to make decisions for public benefit, including choices for safe, sustainable public fleets. The visible nature of investment in public fleets will
provide corresponding momentum for the growth and acceptance of greener fuel choices throughout the non-attainment area.

Municipalities are prepared to participate in vehicle conversions that will help achieve target emission reductions. The Municipal Fleet Managers Association is well-versed in alternative fuel technologies and supports transition to cleaner fuels for appropriate public service vehicles. Eighty-five Greenest Region Compact communities formally support the goal to “operate a safe, clean and efficient fleet”.

Further, incentives are more critical to assure public fleet success than they are for private and non-road sectors. Municipal fleets do not generate revenue that can support cleaner fuel conversions and they are allowed neither tax incentives nor depreciation allowances available to private fleets. There is comparatively lower mileage and fuel use for most public fleets, making adequate return on investment difficult to achieve, despite strong localized public benefit.

5. Allocate for Light-Duty EV Charging Infrastructure

The Consent Decree allows an allocation of 15% for light-duty electric vehicle supply equipment (EVSE). So far, ten other states have allocated the full 15% for EVSE and three more states have allocated more than 10% for EVSE. Municipalities are strongly supportive of investment in EV charging infrastructure that is widely accessible through public, workplace and multiple-unit dwelling installations. Again, Greenest Region Compact communities support accessible, sustainable transportation networks and therefore we request the full, allowable allocation of 15% for light-duty EVSE.

In the draft BMP, IEPA has justified investment EVSE installation only when associated with the electrification of vehicles in the other EMA categories to prevent ‘stranding’ of EVSE assets. Such concerns can be mitigated in a grant/incentive evaluation process that requires guaranteeing usage of the EVSE.

6. Design an Effective Grant/Incentive Program

The strategic disbursement of VW Trust Fund monies to achieve Illinois EPA’s goals, comply with the Consent Decree and best leverage the opportunities for collaborating with many stakeholders is indeed a challenge. However, the VW Mitigation Trust provides an unprecedented opportunity to support clean, sustainable transportation; boost sustainable industries; and make strides to protect public health through improved air quality. It is essential to design an effective grant/ incentive program that optimizes Illinois’ strengths and most effectively serves its needs.

A. Advisory Group
A broadly inclusive and knowledgeable advisory group that includes public sector representatives and alternative fuel experts is needed to oversee the development of the
grant/incentive program and implementation strategies. This advisory group should be involved in the design of the IEPA’s VW Trust grant program to assure fund disbursements achieve emission-reduction targets, and appropriately serve target populations and objectives.

B. Application scoring to achieve objectives
Priority outcomes, to be met by strategically scoring applications and disbursing fund include:

Prioritization of the cleanest, most beneficial choices within the EMA’s
- Emissions reduction
  - NOx Reduction
  - Other criteria pollution reduction (CO, HC, PM, etc.)
  - Greenhouse gas reduction
- Technology choices
  - Whether converting from diesel Tier 0 through 3 up to Tier 4 diesel
  - Whether converting to alternative fuel over conversion to cleaner diesel
    - Alternative fuels including natural gas (CNG), propane, and biofuels
  - Use of Electrification or Hydrogen (Zero Emission Vehicles)
  - Use of Hybridization
- Prioritization to serve target populations
  - Non-attainment areas
  - Environmental justice communities
  - Eligible VW vehicle ownership communities
  - Demonstrable public benefit

C. Fair grant process
A competitive grant process that allows public agencies to participate fairly is needed. Vouchers that facilitate expeditious public procurement of clean vehicles are preferred. A competitive process with ample, defined grant award and contracting cycles is needed to allow public sector fleets to complete transparent, public procurement processes and allow them fair access to funds. Truck safety equipment should be required for all grant disbursements, such as truck sideguards and crossover mirrors to further enhance the public health benefits.

Tiered incentives rates can stretch VW Trust Funds. Maximum grant fund reimbursement rates should be provided to highest performing projects, while lower reimbursement rates can be provided to less-impactful, but valuable public-sector projects. Proposed reimbursement rates of 75% do not adequately share benefits among public agencies as well as more modest reimbursements would.

7. Improve and align all green fleet programs

VW Trust Funds can complement existing green fleet grant programs to leverage support for comprehensive transition to cleaner fuels and provide greater air quality benefits to targeted populations. The two active programs funded by US DOT’s Congestion Mitigation and Air Quality program, (CMAQ) for vehicles – Chicago Area Green Fleet Grant Program and Drive
Clean Chicago are important complements to the VW Trust funded-grant program. Notably, Drive Clean Chicago serves Class 2-3 vehicles, which are not eligible under VW Trust, but desirable targets for emission reducing strategies. Successful elements of these existing programs, such as vouchers can be retained. Unsuccessful elements, such as prolonged approval times, should be improved.

Strategic alignment of these programs is essential and should be done through the appropriate IEPA office that is best suited to provide technical assistance, efficient grant-making, and effective outreach.

All IEPA green fleet programs should be managed through a streamlined single website portal to facilitate access to funding and provide clear guidance on eligibility; grant amounts, application process and timing. Clear, effective and timely communication about these aligned grant opportunities is requested.

This was a synopsis of the thoughts and observations of our collective organization. We hope you will include our voices and ideas in the disbursement of these VW funds with the shared goal of a cleaner environment for all.

On behalf of the 120+ members of the Municipal Fleet Managers Association

Ken Crowley CPFP
Superintendent of Fleet Services
www.oak-park.us

About the Municipal Fleet Managers Association (MFMA)

The MFMA began as an informal network for municipal fleet managers to share information and learn from one another. In 1993 it was incorporated as a non-profit professional organization. MFMA’s intent is to promote cost effective fleet management policies, procedures and techniques among members through technical and managerial education and training. Information on current products is exchanged through vendor contact. Specific problems concerning government fleet operations is shared by members at monthly meetings. MFMA membership is open to all qualified individuals who are involved in the management or maintenance of a government fleet.
Yates, Evan

From: Tim Milburn  
Sent: Thursday, April 19, 2018 2:51 PM  
To: EPA.VWSettlement  
Cc: Paul Jensen  
Subject: [External] Comments to VW Trust Fund Beneficiary Mitigation Plan  
Attachments: IEPA Comment Submittal GW2G 19Apr2018.docx

Dear IEPA:

Please find my comments based on my review of the BMP and a series of subsequent discussions with stakeholders.

Please feel free to contact me with comments or questions.

Best regards,

Tim Milburn

Green Ways 2Go
a business unit of Green Way Energy, LLC

Website: www.greenways2go.com | Skype: 

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April 19, 2018

Illinois Environmental Protection Agency
Springfield, Illinois
Sent via email

Subject: Feedback on Illinois Beneficiary Mitigation Plan (BMP) for the VW Mitigation Trust Fund, Appendix D
From: Tim Milburn, Green Ways 2Go
847-826-3314
Tim.milburn@greenways2go.com

As a matter of introduction, my company, Green Way Energy, LLC, D.B.A. as Green Ways 2Go is an active participant in the alternative transportation field, including experience in electrification, natural gas, propane, biofuels and hydrogen for cars, trucks, buses, locomotives, marine and industrial applications, including the supporting infrastructure. I am a member of the Chicago Area Clean Cities Steering Team and have been supporting the Metropolitan Mayors Caucus on a consulting basis for this subject report. I recently shared a panel with Brad Frost of the IL EPA on this subject. The following compilation represents my ideas related to the IEPA’s BMP. Some of the discussion below reflects interpretation of the BMP, while other ideas offer suggestions, comments and questions that should be considered.

1. **Allocations:** are the allocations fair to all stakeholders?
   a. As drafted, the splits are proportionately heavily weighted for "non-road" (65%, $70 MM) to EMA 3 (Freight switchers) and EMA 4, (ferries and tugs) and with potential allocations using EMA 10 (DERA) for passenger rail. This funding is ostensibly to be significantly applied to fund rail switchers and Metra Tier 0 diesel locomotive engines to convert to Tier 4 diesels, with possible applications for tugs and ferries, which at this point is perceived as having limited application (but this might change).
   b. 10% to electric school buses. This allocation has been designated as a carve out because the change in NOx emission to move from diesel to electric is minimal and if the scoring for projects were based strictly on NOx reduction, funding for these conversions would be difficult to justify on NOx alone. As e-school buses would directly act to improve the health of kids, this category has been drafted as a carve out. This logic does not necessarily look at the well-to-wheels emissions but rather tailpipe emissions.
VW Mitigation Fund Comments to Illinois BMP Draft

c. The balance of the draft allocations is 5% administrative and 20% for the remainder of all public and private fleets. Based on public feedback, the public and private sectors feel this is too small of a share for reasons discussed below. This sector would be better served if the available funds were higher, perhaps 40% instead of 20%, possibly with a public sector carve out.

2. **Scoring** – the scoring system has yet to be defined and can make a huge difference in the effectiveness and fairness of the program. Will the incentive levels be varied based on various scoring parameters? There should be a way to prioritize the amount of funding (e.g. percentage rebate) and total category amount based on the cleanest and fairest solutions. Scoring could set the stage for different public and private incentive allocations based on these parameters. Some logical scoring parameters:

a. Emissions reduction
   i. NOx Reduction
   ii. Other criteria pollution reduction (e.g. Carbon Monoxide (CO), Hydrocarbons (HC), Particulate Matter (PM), etc.).
   iii. Greenhouse gas reduction

b. Technology choices
   i. Whether converting from diesel Tier 0 through 3 up to Tier 4 diesel
   ii. Whether converting to alternative fuel over conversion to cleaner diesel
      1. Alternative fuels including natural gas (CNG), propane, and biofuels
   iii. Use of Electrification or Hydrogen (Zero Emission Vehicles)
   iv. Use of Hybridization

c. Cost effectiveness
   i. How much emissions reduction results per incentive dollar invested?

d. Prioritization to serve target populations
   i. Non-attainment areas
   ii. Environmental justice communities
   iii. Eligible VW vehicle ownership communities
   iv. Demonstrable public benefit

e. **Concept**: Each of the scoring parameters can be used to drive the percentage of reimbursement. Use incentives to incentivize greener solutions, as contrasted to NOx-reduction only, while still achieving NOx reduction goals.

f. **Concern**: if a diesel engine is swapped for another diesel engine or repowered, this does little to reduce GHG emissions. These will be
VW Mitigation Fund Comments to Illinois BMP Draft

new or effectively new engines, with typical expected usage lives of perhaps 30 or more years for locomotives and 15 or more years for trucks. We are arguably more in need of reduction of GHGs than NOx and this funding can do both. This parameter should be considered in any decisions and a GHG weighting in the score is one way to influence choices. Without this, fleets will likely just swap out diesel for diesel and the opportunity to reduce greenhouse gases will be lost for these vehicles for a generation.

Further, if the NOx generated from the 23,600 non-compliant VW’s can be offset AND other pollutants and GHGs can also be reduced, is this not a better way to leverage the funding? Relative to what can be done to reduce NOx, this is an easy goal to achieve with any number of allocations.

3. Public Carve Out – due to the unique constraint of government entities, much like the electrical school buses, a carve out for the public sector should be considered.
   a. Municipalities are committed to public good and this commitment is often more overt or more highly prioritized compared to private fleets. Municipalities have high public visibility and to the extent they green their fleets, this will provide corresponding momentum for the growth and acceptance of green vs. traditional alternatives. Based on a series of surveys and other research completed by the Metropolitan Mayors Caucus (e.g. Greenest Region Compact), there is a strong demand for greening of transportation within the Chicagoland public fleets.
   b. Incentives are more critical to public fleet success than private and non-road.
      i. Private businesses are allowed tax incentives and depreciation write-offs not available to public fleets.
      ii. Rail has other subsidy sources (e.g. US DOT/CMAQ)
      iii. The ROI is much harder to justify for municipalities due to the comparatively lower miles and gallons of fuel. Depending on the conversion solutions, larger fleets with more gallons per vehicle may be able to justify investment in alternatives with lower incentive contribution or even without incentives. Few municipalities can support investment in green fleets without subsidies.
   c. Public budgeting follows a specific process and schedule of events and varies by community. Private fleets have greater planning flexibility if deciding to take advantage of funds. The concern is the private sector will therefore have quicker access to the funds and may create a built-in disadvantage for the public sector.
d. Concept: provide either of the following special program considerations:
   i. Public carve out
   ii. Public scoring incentive
   iii. Integrate public carve out with electric school bus carve out, but raise allocation percentage

4. **Adherence to and Flexibility with Consent Decree** – there is some degree of interpretation of the Consent Decree, which can be taken as strict, flexible or in between and some latitude is given for the Beneficiary in the Consent Decree. The Illinois plan should apply the funds within the Consent Decree's constraints, but in the best interest of the environment and the stakeholders.
   a. If a very strict interpretation of Consent Decree is taken, public fleets are largely left out, i.e. there are few, if any, “cargo and freight” applications for most municipalities. If this is the case, how does the State plan to support municipalities? A realistic definition of which vehicles applies is required.
      i. NOx reduction is a function of 1) engine horsepower, 2) operating hours 3) duty cycle 4) amount of fuel consumed 5) age of the engine being displaced/repowered 6) type of engine, fuel, and after-treatment being employed in the solution and 7) whether the change relates to locomotives vs. truck engines, which have different emission standards, and the emission standards that are being applied (e.g. Tier 0 vs. Tier 4).
      ii. NOx production is not generally related to whether the vehicle is used for freight hauling, construction, snow plowing, people-moving, fire-fighting, etc. *The engine is the source of emissions*. IEPA’s proposed interpretation of Class 4 to 8 should not determine if a vehicle is eligible or ineligible because it travels the interstate to deliver goods, mixes concrete, or provides services to the public, including protecting the public’s health and safety.
      iii. The Consent Decree (Appendix D-1, Definitions) indicates what is *included*, by way of example, but does not explicitly *exclude* certain types of vehicles. The Consent Decree allows, EMA-6 “Class 4-7 Local Freight Trucks (Medium Trucks)” and EMA-1 “Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)” which should be interpreted to include vehicles that meet the performance definition and serve priority populations, identified in the draft BMP. This should include emergency-response vehicles
and all public service vehicles in these vehicle classes. Strictly interpreting “freight” trucks might exclude public sector fleets that directly impact target populations.

iv. The amount of NOx produced by engines varies based on the parameters listed above. As these parameters influence the assumed NOx production, and therefore justification for funding allocations, the assumptions applied should be clearly provided by the IEPA in the final BMP. The draft BMP reports NOx reduction for on-road EMA’s @100 tons per year vs. non-road EMA’s @1700 TPY, which were ostensibly derived using the suggested DEQ or AFLEET tools. Based on cursory analyses using AFLEET, these NOx reductions seem to make assumptions that favor the non-road, compared to the on road. These assumptions also do not openly account for other pollution and GHGs and the costs to achieve these conversions. Assumptions for calculating expected results, and therefore allocations for all EMA’s must be consistently applied and openly disclosed. This concern leads to some questions on the assumptions:

1. Which locomotive conversions were assumed?
   a. Diesel to diesel?
   b. Any alternative fuels?
   c. Tier 0 to Tier 4?

2. Similarly, what truck conversion assumptions were applied?

v. The Consent Decree, Appendix D-1, defines eligible vehicles are model years 1992 to 2006, unless the Beneficiary provides additionally for model years 2007 through 2012. If these newer models are to be included it must be made clear in Illinois’ final BMP.

b. In the draft BMP, the EMA 9: Light Duty Electric Vehicle Supply Equipment (EVSE) has been excluded as a specific category in favor of integrating this in the other allocations. The reason offered for this IL EPA BMP decision was to prevent stranding of EVSE assets, and necessarily associating an EVSE installation with electrification of vehicles under the allocated categories.

i. Based on the current allocations, 85% of the funding is going to medium to heavy duty on road and off road

Green Ways 2Go
vehicles/locomotives, and not light duty vehicles which is implied as part of EMA 9 qualifications.

i. The interpretation of EMA 9 is to fund more public, workplace and multiple unit dwelling EVSE installations. As drafted, the funding could be applied to only workplace (e.g. fleets with Class 4 to 8 EVs) and this would not include the intended public and multiple unit dwelling groups.

ii. From an investment level, many municipalities have expressed an interest in EVSE installations. This can provide EV charging for public fleet electric vehicles and the general public. The installation of other types of alternative fuel infrastructure (e.g. CNG) is typically financially out of reach, but EV charging is within reach. By limiting the EMA 9 funding to be tied to the other groups, this effectively forces municipalities to purchase Class 4 to 8 electric vehicles or repowers which would apply to public works only and would not serve the broader public as a source of EV charging. Although this is a good outcome, the plan should not constrain a municipality to EVSE for these larger vehicles, if the more logical answer is to purchase EVs and be supported with funding on the EVSE side.

iii. The charging infrastructure for many of the current medium through heavy duty EVs is vehicle-proprietary or can only be used on a limited number of EV models. This is in contrast to the wide range of EVSE technologies based on the J1772 standards, which provide use for either all vehicles or all electric only vehicles.

iv. If "stranded assets" is the concern, this can be mitigated programmatically and still apply funds to the public and multiple unit dwelling categories. Demonstration of how an applicant will mitigate standing/guaranteeing usage could be a requirement of the application process, possibly with a verification step.

v. Most other states that have developed BMPs are allocating funds specifically for light duty EVSE.

c. Class 1-3 vehicles: Is there any way to allow for these vehicles? If not, can IL EPA work to better allocate existing programs and / or inform future policies and incentives?

d. If DERA funds are to be applied to passenger locomotive engines, can this same process be applied to truck and bus engines? If so, how does this affect the "cargo and freight" characterization? Would this provide a pathway for fire truck and other "non-freight" vehicles to access funds? How might municipalities leverage DERA?
VW Mitigation Fund Comments to Illinois BMP Draft

e. Per Appendix D-1, the eligible vehicles are model years 1992 to 2006, unless the state provides additionally for model years 2007 through 2012. What is Illinois status on this – what years are eligible?

5. Process

a. To the extent that the draft BMP provisions are maintained, the importance of other Illinois green transportation incentives grows. There are two active CMAQ funded programs for vehicles – Chicago Area Green Fleet Grant Program and Drive Clean Chicago (voucher program).

i. Feedback from municipalities indicates that the Green Fleet program has not worked effectively. It takes an unexpectantly long time to receive grant funds. The Drive Clean Chicago program has had more favorable feedback, as the subsidy payment is made at the time of purchase using vouchers. Many public entities are not well informed about these and past incentive programs.

ii. If all incentive programs could be managed through a single portal (website) to facilitate access to funding and advice on funding eligibility, amounts, project application process and timing, this would help make all the programs more effectively. Other forms of more effective communication are recommended as well.

b. Review process- as indicated, there will be 3 allocation periods. One third in the first year, etc..

i. Will the allocation be based on a list of pre-applied for projects in the queue? Will the funding only be let once a critical mass is accumulated and then only for a short time frame?

ii. What happens to entities that apply after the first project allocation is made? Will this be an ongoing process, or will an applicant have to wait until the next allocation period?

iii. How long will the application window last?

iv. The process should consider a mechanism for an ongoing application queue. Budgets may not coincide with the allocation periods. The process should not require a single time window / deadline when all projects are approved. The process should allow adequate time to purchase vehicles and have a timely review process so local governments can go through their procurement process without fear of losing funds.
c. Having an advisory board is recommended- provide ongoing assessment of the process, its effectiveness, changes in the market, changes in policy, etc.
From: Anderson, Kathy
Sent: Thursday, April 19, 2018 3:31 PM
To: EPA.VWSettlement
Subject: [External]

We, at Vienna High School #13-3 in Illinois, believe that the funds should be spent on electric school buses. The electric school buses have many advantages over the diesel including:
The contribution to the overall health and safety of students, staff, parents, bus drivers, etc as they would not be breathing the fumes from gas or diesel as this would be a detriment to everyone's health. The idling of the diesel buses attribute to this situation. Having an electric bus would greatly reduce the idling and exposure of fumes to children.

Thank you,
Kathy Anderson
Dean of Instruction
Vienna High School #13-3
To Whom it May Concern,

The City of Evanston would like to submit these written comments, as attached, regarding the plan and how funds from the VW Settlement should be distributed throughout Illinois.

Thank you,

Kumar Jensen, ISSP-SA  
Sustainability Coordinator  
City Manager's Office  
City of Evanston

[EXTERNAL] VW Settlement Mitigation Plan Comments  
City of Evanston Comments on Illinois BMP.pdf
Date: April 19, 2018

To Whom It May Concern
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

Subject: Comment on proposed Beneficiary Mitigation Plan (BMP) related to the State of Illinois' Allocation of Funds from the Volkswagen Settlement

Dear Illinois EPA:

The City of Evanston is a proud member of the Metropolitan Mayor Caucus (MMC) and supports their valuable collaborative regional work. In conjunction with MMC’s Environment Committee the City of Evanston is pleased to submit the below comments on the proposed Beneficiary Mitigation Plan. The City of Evanston is committed to ambitious climate action goals including 100% clean energy and reducing our greenhouse gas emissions by 80% by 2050. In order to meet these goals we urge the State of Illinois EPA to allocate funds through the Beneficiary Mitigation Plan in ways that will have the deepest impact on longterm reductions in greenhouse gas emissions state-wide and support on road fleet transitions to cleaner newer technology.

The City believes that local governments have an important role to play in reducing greenhouse gas emissions and supporting fleets within our jurisdictions to do the same. Revising the BMP in the below ways to ensure that those resources are more adequately distributed is imperative to moving Illinois to cleaner forms of transportation. Thank you for providing this opportunity to comment. Please see the below specific comments regarding the BMP and funding allocations.

Comments

The Illinois draft Beneficiary Mitigation Plan (BMP) plan should have benefitted from input from a diverse array of informed stakeholders who can contribute to the successful mitigation of VW's unlawful emissions in Illinois.
Other states began public engagement in late 2016 and throughout 2017. Illinois did not have a clear public engagement strategy prior to the release of the draft BMP in March 2018. Illinois is now upon the deadline to submit its draft BMP and it appears that funding allocations and expected outcomes are not optimized this draft plan. Therefore, a strong BMP that establishes clear, achievable, sensible and fair Eligible Mitigation Action (EMA) priorities that most benefit all impacted residents of Illinois, should be submitted by IEPA in a timely manner. Valuable stakeholder input should be formalized through a stakeholder advisory group that designs an effective grant/incentive program to implement the Illinois VW BMP. Such a stakeholder advisory group should also provide ongoing oversight of this grant/incentive program to allow for equitable and effective disbursement of Illinois VW Trust Funds in Illinois.

*To shape this critical Illinois’ BMP we offer the following comments and recommendations:*

1. **Rationale behind proposed allocations**

   **A. Broaden emissions reduction targets**

   Emissions targets in the draft BMP are fixed on Nitrogen Oxide (NOx) emissions, yet this should not be the exclusive focus of EMA’s in the final plan. The VW settlement offers an unprecedented opportunity to drive more sustainable fuel solutions, while handily meeting NOx reduction goals. NOx generated from the 23,600 non-compliant VW’s can be offset and other pollutants (Carbon Monoxide (CO), Hydrocarbons (HC), Particulate Matter (PM), etc.) and greenhouse gas emissions (GHGs) can and should also be reduced. Reducing GHG is an important concern among public agencies, and especially among the 85 communities in the non-attainment area that have formally supported the consensus sustainability goals of the Greenest Region Compact. Broadly addressing emission targets for long-term public health benefits is the most effective way to leverage VW Trust funding.

   It is expected with implementation of proposed non-road EMA’s, that a diesel engine will be swapped for another diesel engine or repowered to reduce NOx emissions. However, this practice does little to reduce GHG emissions. These new or effectively new engines, will have an expected life span of 30 or more years for locomotives and 15 or more years for trucks. Unless the cleanest solutions within the EMAs are optimized, the opportunity to reduce greenhouse gases will be lost for these vehicles for a generation, or more. There is arguably a more urgent need for reduction of GHGs than NOx, and this VW Trust funding can and should do both.

   **B. Focus on contributing emissions sources**

   Diesel vehicles are responsible for 29% of NOx emissions in Cook County, compared to only 3% of NOx emissions contributed by locomotives. The proposed allocation of 65% for non-road, which is understood to be predominantly locomotives, is not appropriately balanced to address NOx sources. Significantly greater allocation is needed to mitigate NOx contributions from diesel vehicles. The data source for the NOx Emission Inventor for Non-Attainment Criteria Pollutants is the Illinois Environmental Protection Agency's
Emissions Inventories, 2008 and Chicago Department of Environment, May 2010. While this available data is limited to Cook County, it represents a substantial proportion of the targeted region in the northeast non-attainment area.

C. Be transparent and consistent with assumptions
The amount of NOx produced by engines varies based on the parameters highlighted below (item 2A). As these parameters influence the assumed NOx production, and therefore justification for funding allocations, the assumptions applied should be clearly provided by the IEPA in the final BMP. The draft BMP reports NOx reduction for on-road EMA’s @100 tons per year vs. non-road EMA’s @1700 TPY, which were ostensibly derived using the suggested DEQ or AFLEET tools. Based on cursory analyses using AFLEET, these NOx reductions seem to make assumptions that favor the non-road, compared to the on road. These assumptions also do not openly account for other pollution and GHGs and the costs to achieve these conversions. Assumptions for calculating expected results, and therefore allocations for all EMA’s must be consistently applied and openly disclosed.

2. Interpret the Consent Decree
The Consent Decree allows some latitude to IEPA (the Beneficiary) to interpret the parameters of the EMA’s to best enable eligible VW Fund applicants (public and private fleet managers, industry and other stakeholders) to deliver results for Illinois.

A. Define EMA’s by performance, not vehicle type
NOx reduction is a function of:
1) engine horsepower
2) operating hours
3) duty cycle
4) amount of fuel consumed
5) age of the engine being displaced/repowered
6) type of engine, fuel, and after-treatment being employed in the solution and
7) whether the change relates to locomotives vs. truck engines, which have different emission standards, and the emission standards that are being applied (e.g. Tier 0 vs. Tier 4).

NOx production is not generally related to whether the vehicle is used for freight hauling, construction, snow plowing, people-moving, fire-fighting, etc. The engine is the source of emissions. IEPA’s proposed interpretation of Class 4 to 8 should not determine if a vehicle is eligible or ineligible because it travels the interstate to deliver goods, mixes concrete, or provides services to the public, including protecting the public’s health and safety.

B. Consent Decree Definitions
The Consent Decree (Appendix D-1, Definitions) indicates what is included, by way of example, but does not explicitly exclude certain types of vehicles. The Consent Decree allows, EMA-6 “Class 4-7 Local Freight Trucks (Medium Trucks)” and EMA-1 “Class 8
Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)" which should be interpreted to include vehicles that meet the performance definition and serve priority populations, identified in the draft BMP. This should include emergency-response vehicles and all public service vehicles in these vehicle classes. Strictly interpreting “freight” trucks might exclude public sector fleets that directly impact target populations.

The Consent Decree, Appendix D-1, defines eligible vehicles are model years 1992 to 2006, unless the Beneficiary provides additionally for model years 2007 through 2012. If these newer models are to be included it must be made clear in Illinois’ final BMP.

3. EMA Allocations

A. Reduce proposed allocations

The draft BMP proposed allocation of 65% for non-road applications (notably locomotion), 10% for electric buses and only 20% for all included public and private trucks (Class 4 to 8) overly favors non-road applications. Allocations in the final Illinois BMP should be substantiated based on issues raised above.

To be clear, the proposed allocation 65% for non-road is excessive. This is out-of-line with non-road allocations made by other states and fails to focus benefits on the target populations in Illinois. Further, US DOT has historically provided and currently provides CMAQ funds to subsidize cleaner locomotives. Reallocating VW funds more appropriately to diesel vehicles, Class 4-8 better serves IEPA’s stated BMP objective to “maximize and leverage funding”.

Further, the cost assumptions for the reduction in NOx for non-road and on road are not stated yet are very important to decision-making. The cost to make a single locomotive Tier 4 from Tier 0 can cost between $2.5 and 7 million each, depending on whether a new engine or a repowered engine is applied and whether an alternative fuel to diesel is applied. Typical costs to change a truck to cleaner vehicles range from $20,000 to $100,000, depending on a range of factors. For the low end of the truck range ($20,000), this translates into 125 to 350 trucks for every locomotive, from a grant funding perspective.

The proposed allocation of 10% for all electric school buses is not substantiated by performance or cost-effectiveness. According to IEPA’s own website, electric school bus engines are shown to have the lowest potential emissions reductions of all EMA’s. While the BMP estimates performance outcomes for both on-road projects (100 tons NOx/year) and off-road projects of 1,700 tons NOx/year), there is no estimate provided for the reduction potential for conversion to all electric school buses. From proposed allocations, cost per ton of NOx reduced can be estimated for on-road projects (EMA 1, 2 and 6) at 0.217 $/MMt; and non-road projects (EMA 3 and 4) at 0.042 $/MMt. This comparison cannot be calculated for all electric school buses and this proposed carve-out is unsubstantiated based on the goal of NOx reduction.

B. Establish a public-sector allocation
A more equitable and effective carve-out should also include public transit buses and public Class 4-8 trucks which show greater potential for emissions reduction than school buses. This allocation category should include all public-sector vehicles, Class 4-8, including public transit and school buses should total 30% and should allow applicants to determine the optimal clean fuel choice for their use.

C. Use DERA funds
As stated, under EMA 10, Diesel Emission Reduction Act (DERA) funds may be leveraged for replacement or repower of passenger locomotives. This same process should be applied to truck engines within the DERA definitions for eligible Class 4 through 8 vehicles. This would leverage matching DERA funding to allow more public fleets to participate in the greening of their fleets.

4. Invest in Municipal Fleets

It is important to prioritize municipalities as beneficiaries of VW mitigation funds for many reasons. Public fleets provide visible and essential public services to residents equitably throughout the non-attainment area, and specifically within target areas of VW ownership and environmental justice priorities. Investment in cleaner municipal fleets provides demonstrable localized benefits. Municipalities are trusted to make decisions for public benefit, including choices for safe, sustainable public fleets. The visible nature of investment in public fleets will provide corresponding momentum for the growth and acceptance of greener fuel choices throughout the non-attainment area.

Municipalities are prepared to participate in vehicle conversions that will help achieve target emission reductions. The Municipal Fleet Managers Association is well-versed in alternative fuel technologies and supports transition to cleaner fuels for appropriate public service vehicles. Eighty-five Greenest Region Compact communities formally support the goal to “operate a safe, clean and efficient fleet”.

Further, incentives are more critical to assure public fleet success than they are for private and non-road sectors. Municipal fleets do not generate revenue that can support cleaner fuel conversions and they are allowed neither tax incentives nor depreciation allowances available to private fleets. There is comparatively lower mileage and fuel use for most public fleets, making adequate return on investment difficult to achieve, despite strong localized public benefit.

5. Allocate for Light-Duty EV Charging Infrastructure

The Consent Decree allows an allocation of 15% for light-duty electric vehicle supply equipment (EVSE). So far, ten other states have allocated the full 15% for EVSE and three more states have allocated more than 10% for EVSE. Municipalities are strongly supportive of investment in EV charging infrastructure that is widely accessible through public, workplace and multiple-unit dwelling installations. Again, Greenest Region Compact communities support accessible, sustainable transportation networks and therefore we request the full, allowable allocation of 15% for light-duty EVSE.
In the draft BMP, IEPA has justified investment in EVSE installation only when associated with the electrification of vehicles in the other EMA categories to prevent ‘stranding’ of EVSE assets. Such concerns can be mitigated in a grant/incentive evaluation process that requires guaranteeing usage of the EVSE.

6. Design an Effective Grant/Incentive Program

The strategic disbursement of VW Trust Fund monies to achieve Illinois EPA’s goals, comply with the Consent Decree and best leverage the opportunities for collaborating with many stakeholders is indeed a challenge. However, the VW Mitigation Trust provides an unprecedented opportunity to support clean, sustainable transportation; boost sustainable industries; and make strides to protect public health through improved air quality. It is essential to design an effective grant/incentive program that optimizes Illinois’ strengths and most effectively serves its needs.

A. Advisory Group

A broadly inclusive and knowledgeable advisory group that includes public sector representatives and alternative fuel experts is needed to oversee the development of the grant/incentive program and implementation strategies. This advisory group should be involved in the design of the IEPA’s VW Trust grant program to assure fund disbursements achieve emission-reduction targets, and appropriately serve target populations and objectives.

B. Application scoring to achieve objectives

Priority outcomes, to be met by strategically scoring applications and disbursing fund include:

Prioritization of the cleanest, most beneficial choices within the EMA’s

- Emissions reduction
  - NOx Reduction
  - Other criteria pollution reduction (CO, HC, PM, etc.)
  - Greenhouse gas reduction
- Technology choices
  - Whether converting from diesel Tier 0 through 3 up to Tier 4 diesel
  - Whether converting to alternative fuel over conversion to cleaner diesel
    - Alternative fuels including natural gas (CNG), propane, and biofuels
  - Use of Electrification or Hydrogen (Zero Emission Vehicles)
  - Use of Hybridization
- Prioritization to serve target populations
  - Non-attainment areas
  - Environmental justice communities
  - Eligible VW vehicle ownership communities
  - Demonstrable public benefit

C. Fair grant process
A competitive grant process that allows public agencies to participate fairly, is needed. Vouchers that facilitate expeditious public procurement of clean vehicles, are preferred. A competitive process with ample, defined grant award and contracting cycles, is needed to allow public sector fleets to complete transparent, public procurement processes and allow them fair access to funds. Truck safety equipment should be required for all grant disbursements, such as truck sideguards and crossover mirrors to further enhance the public health benefits.

Tiered incentives rates can stretch VW Trust Funds. Maximum grant fund reimbursement rates should be provided to highest performing projects, while lower reimbursement rates can be provided to less-impactful, but valuable public-sector projects. Proposed reimbursement rates of 75% do not adequately share benefits among public agencies as well as more modest reimbursements would.

7. Improve and align all green fleet programs

VW Trust Funds can complement existing green fleet grant programs to leverage support for comprehensive transition to cleaner fuels and provide greater air quality benefits to targeted populations. The two active programs funded by US DOT’s Congestion Mitigation and Air Quality program, (CMAQ) for vehicles – Chicago Area Green Fleet Grant Program and Drive Clean Chicago are important complements to the VW Trust funded-grant program. Notably, Drive Clean Chicago serves Class 2-3 vehicles, which are not eligible under VW Trust, but desirable targets for emission reducing strategies. Successful elements of these existing programs, such as vouchers can be retained. Unsuccessful elements, such as prolonged approval times, should be improved.

Strategic alignment of these programs is essential and should be done through the appropriate IEPA office that is best suited to provide technical assistance, efficient grant-making, and effective outreach.

All IEPA green fleet programs should be managed through a streamlined single website portal to facilitate access to funding and provide clear guidance on eligibility; grant amounts, application process and timing. Clear, effective and timely communication about these aligned grant opportunities is requested.

On Behalf of the City of Evanston,

[Signature]

Kumar Jensen
Sustainability Coordinator
City of Evanston, IL
To whom it may concern:

The Town of Normal is aware of the VW settlement process currently underway. We will be very interested to see the outcome, as the Town has been very supportive of EV infrastructure in the past 10 years. We are strongly committed to environmental sustainability, and we believe that EV technology is a critical part of the sustainable transportation picture moving into the future.

Best,
Mercy

Mercy Davison
Town Planner

Learn more about the Planning Department at http://www.normal.org/index.aspx?nid=161

Please consider the environment before printing this e-mail

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Dear Mr. Frost,

We applaud and support the recent steps taken by Governor Rauner and the Illinois Environmental Protection Agency to seek public input on how to spend the approximately $109 million Illinois is expected to receive from the VW Trust. Commercial trucks and school buses are a major contributor to the NOx inventory in Illinois. Based on data from the U.S. EPA National Emissions Inventory (https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data), 55% of NOx in IL is from on road sources and this funding offers a unique opportunity to take a significant number of older trucks and school buses off the state’s roads. Based on the significant portion of NOx that comes from on road in the state, we recommend changing the on road allocation from 20% to 40%, reduce off road from 65% to 40%, and use the balance for electric and administration.

According to IHS Polk Registration data there are currently over 2200 pre-1998 buses in the state and over 19,600 pre-2010 buses. We commend efforts that will achieve the greatest amount of NOx reduction, while also specifically looking to positively impact at risk population groups, help non-attainment areas, and areas needing environmental justice. It is our belief the group that most clearly represents these constituencies are school buses and school age children.

The pre-1998 vehicles emit at least 4 grams of NOx per brake-horsepower hour of operation, compared with new diesel-powered trucks and buses, which emit less than two-tenths of a gram of NOx per brake-horsepower hour – or 95% less NOx than the pre-1998 vehicles.

Because of the significant NOx reduction that can be achieved by taking these older trucks and buses off the road, Illinois should use at least $40 million for the replacement of the older vehicles with real-life, ready-today technologies: new diesel- and propane-powered trucks and school buses.

As Figure 1 shows, if the state were to use that $40 million to subsidize 25% of the cost of new vehicles for potential customers, the purchase of diesel- and propane-powered vehicles would result in significantly greater NOx reduction than the purchase of electric vehicles.

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**Figure 1: NOx Reductions Obtained by Using $40 Million to Provide a 25% Subsidy**

<table>
<thead>
<tr>
<th></th>
<th>Diesel</th>
<th>Natural Gas/Propane</th>
<th>Electric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical cost per vehicle</td>
<td>$90,000</td>
<td>$95,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>NOx emissions/vehicle**</td>
<td>0.2</td>
<td>0.15</td>
<td>0 ***</td>
</tr>
<tr>
<td>25% subsidy per vehicle</td>
<td>$22,500</td>
<td>$23,750</td>
<td>$75,000</td>
</tr>
<tr>
<td>Total vehicles purchased</td>
<td>1777</td>
<td>1684</td>
<td>533</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>Total NOx Reduction**</td>
<td>6752.6</td>
<td>6483.4</td>
<td>2132</td>
</tr>
</tbody>
</table>

** g/brake-horsepower hour of operation
*** assumes electricity comes from renewable source

To summarize, the use of $40 million to subsidize replacement of pre-1998 vehicles would achieve total NOx reductions of 6752.6 g/bhp-hr if spent on diesel; 6483.4 g/bhp-hr if spent on natural gas/propane; and only 2132 g/bhp-hr if spent on electric.

Diesel is therefore the most cost-effective NOx reduction solution the state could pursue, with natural gas/propane running a close second. Additionally, this would allow Illinois to eliminate nearly all the states pre-1998 school buses from the inventory.

Thank you for your consideration of this recommendation.

Sincerely,

Meg Kulungowski
Director, Government Relations
April 19, 2018

Illinois Environmental Protection Agency
1021 N Grand Ave E
Springfield, IL 62702

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As Figure 1 shows, if the state were to use that $40 million to subsidize 25% of the cost of new vehicles for potential customers, the purchase of diesel- and propane-powered vehicles would result in significantly greater NOx reduction than the purchase of electric vehicles.

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<th>Diesel</th>
<th>Natural Gas/Propane</th>
<th>Electric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical cost per vehicle</td>
<td>$90,000</td>
<td>$95,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>NOx emissions/vehicle**</td>
<td>0.2</td>
<td>0.15</td>
<td>0 ***</td>
</tr>
<tr>
<td>25% subsidy per vehicle</td>
<td>$22,500</td>
<td>$23,750</td>
<td>$75,000</td>
</tr>
<tr>
<td>Total vehicles purchased</td>
<td>1777</td>
<td>1684</td>
<td>533</td>
</tr>
<tr>
<td>Total NOx Reduction**</td>
<td>6752.6</td>
<td>6483.4</td>
<td>2132</td>
</tr>
</tbody>
</table>

** g/brake-horsepower hour of operation  
*** assumes electricity comes from renewable source

To summarize, the use of $40 million to subsidize replacement of pre-1998 vehicles would achieve total NOx reductions of 6752.6 g/bhp-hr if spent on diesel; 6483.4 g/bhp-hr if spent on natural gas/propane; and only 2132 g/bhp-hr if spent on electric.

Diesel is therefore the most cost-effective NOx reduction solution the state could pursue, with natural gas/propane running a close second. Additionally, this would allow Illinois to eliminate nearly all the states pre-1998 school buses from the inventory.

Thank you for your consideration of this recommendation.

Sincerely,

Meg Kulungowski  
Director, Government Relations
Mr. Frost,
Please see below and attached, IC Bus comments, we appreciate the opportunity.

April 19, 2018

Brad Frost
Illinois EPA
Epa.vwsettlement@illinois.gov

Re: Comments to State of Illinois Draft Beneficiary Mitigation, Appendix D

Thank you for this opportunity to provide our comments into the Illinois Draft Beneficiary Mitigation Plan. The VW Mitigation Trust presents a tremendous opportunity to reduce diesel emissions and improve the environment. Illinois’ initial allocation of $108.0 M will permit the state to make a dramatic reduction in NOx emissions.

Commercial trucks and school buses are major contributors to NOx inventory in Illinois. As we know from the US EPA National Emissions Inventory illustrated on VWclearinghouse.org, 55% of all of IL NOx inventory comes from on-highway sources.

According to IHS Polk Registration there are currently over 2,200 pre-1998 buses in the state and just under 19,700 pre-2010 buses. We support your goals of:

NOx reduction efforts in areas that bear a disproportionate share of air pollution, including environmental justice areas

Maximized NOx reduction

Maximize and leverage funding

We understand the pressures of allocating funds throughout many of the eligible projects identified within the Appendix. Currently, we see the distribution plan to be 65% allocation to off-highway projects. Based on the NOx inventory that 55% comes from on-road, the state is better able to achieve its goals if there is a change from the 20% on-road indicated in the draft Beneficiary Mitigation Plan. Thus we recommend an even split of the funds to 40% off-highway and 40% on-highway which is more in line with the NOx distribution. This provides the electrification and administrative allocations to utilize the balance.

Within the on-highway portion, we recommend that the Class 4-8 school buses be the highest priority with lowered amounts allocated towards the Class 8, and Class 4-7 local freight trucks. We ask that you consider both near and long term impacts and utilize the bulk of available discretionary funding towards school buses.
Accelerating the retirement of older, higher emitting school buses will reduce emissions immediately in the vicinity of an at risk population — school age children. School age children are still developing full respiratory capability, thus emission reduction efforts minimizing exposure for school age children will provide positive benefits throughout their life.

Liberal funding for school buses within nonattainment areas captures the goal of working within these nonattainment areas where need for the children and the general population is greatest.

Liberal funding for school buses will also provide direct and significant benefits for areas needing environmental justice, as these often coincide with the same non-attainment area needs.

We also believe that usage of funds towards new buses provides benefits above the NOx reduction. New school buses can provide the greatest social good, you may be unaware that school buses have unusually long life spans, as such, funding towards school buses therefore extends the timeline of benefits providing the maximum benefit to the environment, the children, and the municipality. Additionally, a new vehicle includes a complete warranty, reducing the cost of near term repairs from the school operating budget. This is in addition to safety and product improvements available only with a new vehicle.

IC Bus is a wholly owned subsidiary of Navistar, Inc., headquartered in Lisle. Midwest Transit Equipment, the IC Bus dealer for Illinois, calls Kankakee home and is the largest school bus dealer in North America.

Navistar operations include its Corporate Office in Lisle, Engineering Center in Melrose Park, Parts Distribution Centers in Joliet and West Chicago, and its Reliability and Training Center in Woodridge. This in addition to 19 unique truck and bus dealers and 5 service centers located across the state.

Investing in school buses is an investment in Illinois. Again, we thank you for this opportunity. Focusing on the schools benefits both the at risk school age population and the larger community. Fiduciary responsibility to the fund and the state would indicate that usage of these funds within public institutions would be the most transformative choice available.

Should you have any questions, please feel free to contact me at 331-332-3074 or any IC Bus or Navistar representative.

Sincerely,

Randall W. Ray

Randall Ray
IC Bus

Randall Ray | Sales Director — IC Bus
April 19, 2018

Brad Frost  
Illinois EPA  
Epa.vwsettlement@illinois.gov

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Should you have any questions, please feel free to contact me at 331-332-3074 or any IC Bus or Navistar representative.

Sincerely,

Randall W. Ray

Randall Ray
IC Bus
According to a slide from the April 3, 2018 Volkswagen Environmental Mitigation Trust Agreement Beneficiary Mitigation Plan (BMP) briefing, "school buses are singled out for funding, but lowest ranked for emissions reductions".

Also according to another slide from the same briefing, "IEPA has discretion over the allocations and may have the authority to include the smaller vehicles".

These two debatable points create the foundation of my suggestions for the BMP.

1. Electric school buses won't have a significant effect on air pollution mitigation.
2. Since it's possible that the BMP will eventually have the ability to finance fleets of smaller vehicles, the best choice for the funds would be to finance a fleet of 100% electric, highway-capable, narrow track vehicles to be charged and driven in high congestion areas in the state. Currently, the only highway-capable narrow track vehicles available on the market are Tangos from Commuter Cars, www.commutercars.com
Single occupant commuting is overwhelmingly the most popular form of commuting. Although not a direct comparison to school bus transportation, if bus commuting was multiplied by 10, it would still be in a vast minority compared with single occupant commuting. The best strategy for cleaner air in electric vehicle transportation in forms supported by the intent of the BMP is to offer an effective electric option for single occupant drivers.

Other advantages of financing a fleet of 100% electric narrow track vehicles include quadrupling parking spaces, creating viable and fast transit desert options, and eliminating bicycle dooring when narrow track vehicles park facing curbs.

To begin the transition to efficient single and duo occupant car commuting in narrow track vehicles, the BMP could finance a pilot program.

Please reply with follow up questions, suggestions, or concerns. I look forward to working with the Illinois EPA to clean air and resolve traffic congestion with narrow track vehicle fleets.

Sincerely,
Michael Weiser
Commuter Cars Corporation

cc: Rick Woodbury, Commuter Cars President, Tango inventor
To whom it may concern:

The Illinois draft Beneficiary Mitigation Plan (BMP) plan should have benefitted from input from a diverse array of informed stakeholders who can contribute to the successful mitigation of VW’s unlawful emissions in Illinois.

Other states began public engagement in late 2016 and throughout 2017. Illinois did not have a clear public engagement strategy prior to the release of the draft BMP in March 2108. Illinois is now upon the deadline to submit its draft BMP and it appears that funding allocations and expected outcomes are not optimized in this draft plan. Therefore, a strong BMP that establishes clear, achievable, sensible and fair Eligible Mitigation Action (EMA) priorities that most benefit all impacted residents of Illinois, should be submitted by IEPA in a timely manner.

Valuable stakeholder input should be formalized through a stakeholder advisory group that designs an effective grant/incentive program to implement the Illinois VW BMP. Such a stakeholder advisory group should also provide ongoing oversight of this grant/incentive program to allow for equitable and effective disbursement of Illinois VW Trust Funds in Illinois.

*To shape this critical Illinois’ BMP City of Naperville offers the following comments and recommendations:*

**1. Rationale behind proposed allocations**

**A. Broaden emissions reduction targets**

Emissions targets in the draft BMP are fixed on Nitrogen Oxide (NOx) emissions, yet this should not be the exclusive focus of EMA’s in the final plan. The VW settlement offers an unprecedented opportunity to drive more sustainable fuel solutions, while handily meeting NOx reduction goals. NOx generated from the 23,600 non-compliant VW’s can be offset and other pollutants (Carbon Monoxide (CO), Hydrocarbons (HC), Particulate Matter (PM), etc.) and greenhouse gas emissions (GHGs) can and should also be reduced. Reducing GHG is an important concern among public agencies, and especially among the 85 communities in the non-attainment area that have formally supported the consensus sustainability goals of the Greenest Region Compact. Broadly addressing emission targets for long-term public health benefits is the most effective way to leverage VW Trust funding.

It is expected with implementation of proposed non-road EMA’s, that a diesel engine will be swapped for another diesel engine or repowered to reduce NOx emissions. However, this practice does little to reduce GHG emissions. These new or effectively new engines, will have an expected life span of 30 or more years for locomotives and 15 or more years for trucks. Unless the cleanest solutions within the EMAs are optimized, the opportunity to reduce greenhouse gases will be lost for these vehicles for a generation, or more. There is
arguably a more urgent need for reduction of GHGs than NOx, and this VW Trust funding can, and should, do both.

B. Focus on contributing emissions sources
Diesel vehicles are responsible for 29% of NOx emissions in Cook County, compared to only 3% of NOx emissions contributed by locomotives. The proposed allocation of 65% for non-road, which is understood to be predominantly locomotives, is not appropriately balanced to address NOx sources. Significantly greater allocation is needed to mitigate NOx contributions from diesel vehicles. The data source for the NOx Emission Inventor for Non-Attainment Criteria Pollutants is the Illinois Environmental Protection Agency’s Emissions Inventories, 2008 and Chicago Department of Environment, May 2010. While this available data is limited to Cook County, it represents a substantial proportion of the targeted region in the northeast non-attainment area.

C. Be transparent and consistent with assumptions
The amount of NOx produced by engines varies based on the parameters highlighted below (Item 2A). As these parameters influence the assumed NOx production, and therefore justification for funding allocations, the assumptions applied should be clearly provided by the IEPA in the final BMP. The draft BMP reports NOx reduction for on-road EMA’s @100 tons per year vs. non-road EMA’s @1700 tons per year, which were ostensibly derived using the suggested DEQ or AFLEET tools. Based on cursory analyses using AFLEET, these NOx reductions seem to make assumptions that favor the non-road, compared to the on road. These assumptions also do not openly account for other pollution and GHGs and the costs to achieve these conversions. Assumptions for calculating expected results, and therefore allocations for all EMA’s must be consistently applied and openly disclosed.

2. Interpret the Consent Decree
The Consent Decree allows some latitude to IEPA (the Beneficiary) to interpret the parameters of the EMA’s to best enable eligible VW Fund applicants (public and private fleet managers, industry and other stakeholders) to deliver results for Illinois.
A. Define EMA’s by performance, not vehicle use type
NOx reduction is a function of:
1) engine horsepower
2) operating hours
3) duty cycle
4) amount of fuel consumed
5) age of the engine being displaced/repowered
6) type of engine, fuel, and after-treatment being employed in the solution and
7) whether the change relates to locomotives vs. truck engines, which have different emission standards, and the emission standards that are being applied (e.g. Tier 0 vs. Tier 4).

NOx production is not generally related to whether the vehicle is used for freight hauling, construction, snow plowing, people-moving, fire-fighting, etc. The engine is the source of emissions. IEPA’s proposed interpretation of Class 4 to 8 should not determine if a vehicle is eligible or ineligible because it travels the interstate to deliver goods, mixes concrete, or provides services to the public, including protecting the public’s health and safety.

B. Consent Decree Definitions
The Consent Decree (Appendix D-1, Definitions) indicates what is included, by way of example, but does not explicitly exclude certain types of vehicles. The Consent Decree allows, EMA-6 “Class 4-7 Local Freight Trucks (Medium Trucks)” and EMA-1 “Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)” which should be interpreted to include vehicles that meet the performance definition and serve priority populations, identified in the draft BMP. This should include all public service vehicles in these vehicle classes, including emergency-response vehicles and apparatus. Strictly interpreting “freight” trucks might exclude public sector fleets that directly impact target populations.

The Consent Decree, Appendix D-1, defines eligible vehicles are model years 1992 to 2006, unless the Beneficiary provides additionally for model years 2007 through 2012. Illinois’ final BMP must make clear whether model years 2007 through 2012 are included.

Clarification is also required on whether eligible vehicles must be replaced with same class units. Greater NOx reductions may in some cases be realized by right-sizing a unit for current applications: a smaller class unit may suffice for current operations or one larger class unit may replace two vehicles rather than one.

3. EMA Allocations

A. Reduce proposed allocations
The draft BMP proposed allocation of 65% for non-road applications (notably locomotion), 10% for electric buses and only 20% for all included public and private trucks (Class 4 to 8) overly favors non-road applications. Allocations in the final Illinois BMP should be substantiated based on issues raised above.

To be clear, the proposed allocation 65% for non-road is excessive. This is out-of-line with non-road allocations made by other states and fails to focus benefits on the target populations in Illinois. Further, US DOT has historically provided and currently provides CMAQ funds to subsidize cleaner locomotives. Reallocating VW funds more appropriately to diesel vehicles, Class 4-8 better serves IEPA’s stated BMP objective to “maximize and leverage funding”.

Using the EPA’s own statistics from 2010:
• Fuel Efficiency: Trains are 2-4 times more fuel efficient than trucks on a ton-mile basis
• Greenhouse Gases: Trains emit 1/3 the GHG emissions of trucks on a ton-mile basis
• NOx Emissions: Trains are 2-3 times cleaner than trucks on a ton-mile basis

Given that trains are already more fuel efficient and emit fewer greenhouse gases and NOx emissions that trucks, it seems a greater allocation to trucks would better serve IEPA’s BMP objective to “maximize emission reductions”.

Further, the cost assumptions for the reduction in NOx for non-road and on road are not stated yet are very important to decision-making. The cost to make a single locomotive Tier 4 from Tier 0 can cost between $2.5 and 7 million each, depending on whether a new engine or a repowered engine is applied and whether an alternative fuel to diesel is applied. Typical costs to change a truck to cleaner vehicles range from $20,000 to $100,000, depending on a range of factors. For the low end of the truck range ($20,000), this translates into 125 to 350 trucks for every locomotive, from a grant funding perspective.

The proposed allocation of 10% for all electric school buses is not substantiated by performance or cost-effectiveness. According to IEPA’s own website, electric school bus engines are shown to have the lowest potential emissions reductions of all EMA’s. While the BMP estimates performance outcomes for both on-road projects (100 tons NOx/year) and off-road projects of 1,700 tons NOx/year, there is no estimate provided for the reduction potential for conversion to all electric school buses. From proposed allocations, cost per ton of NOx reduced can be estimated for on-road projects (EMA 1, 2 and 6) at 0.217 $/MM/t; and non-road projects (EMA 3 and 4) at 0.042 $/MM ton. This comparison cannot be calculated for all electric school buses and this proposed carve-out is unsubstantiated based on the goal of NOx reduction.

B. Establish a public-sector allocation
A more equitable and effective carve-out should also include public transit buses and public Class 4-8 trucks which show greater potential for emissions reduction than school buses. This allocation category should total 30%, include all public-sector vehicles, Class 4-8, including public transit and school buses, and should allow applicants to determine the optimal clean fuel choice for their use.

C. Use DERA funds
As stated, under EMA 10, Diesel Emission Reduction Act (DERA) funds may be leveraged for replacement or repower of passenger locomotives. This same process should be applied to truck engines within the DERA definitions for eligible Class 4 through 8 vehicles. This would leverage matching DERA funding to allow more public fleets to participate in the greening of their fleets. This serves IEPA’s BMP objectives to “maximize and leverage funding” and to “maximize emissions reductions”.

4. Invest in Municipal Fleets

It is important to prioritize municipalities as beneficiaries of VW mitigation funds for many reasons. Public fleets provide visible and essential public services to residents equitably throughout the non-attainment area, and specifically within target areas of VW ownership and environmental justice priorities. Investment in cleaner municipal fleets provides demonstrable localized benefits. Municipalities are trusted to make decisions for public benefit, including choices for safe, sustainable public fleets. The visible nature of investment in public fleets will provide corresponding momentum for the growth and acceptance of greener fuel choices throughout the non-attainment area.
Municipalities are prepared to participate in vehicle conversions that will help achieve target emission reductions. The Municipal Fleet Managers Association is well-versed in alternative fuel technologies and supports transition to cleaner fuels for appropriate public service vehicles. Eighty-five Greenest Region Compact communities formally support the goal to “operate a safe, clean and efficient fleet”.

Further, incentives are more critical to assure public fleet success than they are for private and non-road sectors. Municipal fleets do not generate revenue that can support cleaner fuel conversions and they are allowed neither tax incentives nor depreciation allowances available to private fleets. There is comparatively lower mileage and fuel use for most public fleets, making adequate return on investment difficult to achieve, despite strong localized public benefit.

5. Allocate for Light-Duty EV Charging Infrastructure

The Consent Decree allows an allocation of 15% for light-duty electric vehicle supply equipment (EVSE). So far, ten other states have allocated the full 15% for EVSE and three more states have allocated more than 10% for EVSE. Municipalities are strongly supportive of investment in EV charging infrastructure that is widely accessible through public, workplace and multiple-unit dwelling installations. Again, Greenest Region Compact communities support accessible, sustainable transportation networks and therefore we request the full, allowable allocation of 15% for light-duty EVSE.

In the draft BMP, IEPA has justified investment EVSE installation only when associated with the electrification of vehicles in the other EMA categories to prevent ‘stranding’ of EVSE assets. Such concerns can be mitigated in a grant/incentive evaluation process that requires guaranteeing usage of the EVSE.

6. Design an Effective Grant/Incentive Program

The strategic disbursement of VW Trust Fund monies to achieve Illinois EPA’s goals, comply with the Consent Decree and best leverage the opportunities for collaborating with many stakeholders is indeed a challenge. However, the VW Mitigation Trust provides an unprecedented opportunity to support clean, sustainable transportation; boost sustainable industries; and make strides to protect public health through improved air quality. It is essential to design an effective grant/incentive program that optimizes Illinois’ strengths and most effectively serves its needs.

A. Advisory Group
A broadly inclusive and knowledgeable advisory group that includes public sector representatives and alternative fuel experts is needed to oversee the development of the grant/incentive program and implementation strategies. This advisory group should be involved in the design of the IEPA’s VW Trust grant program to assure fund disbursements achieve emission-reduction targets, and appropriately serve target populations and objectives.

B. Application scoring to achieve objectives
Priority outcomes, to be met by strategically scoring applications and disbursing fund, include:

Prioritization of the cleanest, most beneficial choices within the EMAs
- Emissions reduction
  - NOx Reduction
  - Other criteria pollution reduction (CO, HC, PM, etc.)
  - Greenhouse gas reduction
• Technology choices
  o Whether converting from diesel Tier 0 through 3 up to Tier 4 diesel
  o Whether converting to alternative fuel over conversion to cleaner diesel
    • Alternative fuels including natural gas (CNG), propane, and biofuels
  o Use of Electrification or Hydrogen (Zero Emission Vehicles)
  o Use of Hybridization

• Prioritization to serve target populations
  o Non-attainment areas
  o Environmental justice communities
  o Eligible VW vehicle ownership communities
  o Demonstrable public benefit

C. Fair grant process
A competitive grant process that allows public agencies to participate fairly, is needed. Vouchers that facilitate expeditious public procurement of clean vehicles, are preferred. A competitive process with ample, defined grant award and contracting cycles, is needed to allow public sector fleets to complete transparent, public procurement processes and allow them fair access to funds. Private entities can leverage quick access to capital to fund projects that may require multiple years of budget approval for public agencies. This represents an unfair advantage and will result in an inequitable distribution of funds unless the public purchasing process is accounted for when distributing funds.

Truck safety equipment should be required for all grant disbursements, such as truck sideguards and crossover mirrors to further enhance the public health benefits. Private entities leveraging funds should be required comply with prevailing wage requirements, providing proof of compliance.

Proposed reimbursement rates of 75% limits the number of projects funded by the trust. Tiered incentive rates can stretch VW Trust Funds. Provide maximum grant fund reimbursement rates to highest performing projects. Offer lower reimbursement rates to less-impactful, but valuable public-sector projects. Greater overall NOx emissions reductions and environmental impact can be realized with this tiered approach to distributing funds.

7. Improve and align all green fleet programs
VW Trust Funds can complement existing green fleet grant programs to leverage support for comprehensive transition to cleaner fuels and provide greater air quality benefits to targeted populations. The two active programs funded by US DOT’s Congestion Mitigation and Air Quality program, (CMAQ) for vehicles – Chicago Area Green Fleet Grant Program and Drive Clean Chicago are important complements to the VW Trust funded-grant program. Notably, Drive Clean Chicago serves Class 2-3 vehicles, which are not eligible under VW Trust, but desirable targets for emission reducing strategies. Successful elements of these existing programs, such as vouchers can be retained. Unsuccessful elements, such as prolonged approval times, should be improved.

Strategic alignment of these programs is essential and should be done through the appropriate IEPA office that is best suited to provide technical assistance, efficient grant-making, and effective outreach.

All IEPA green fleet programs should be managed through a streamlined single website portal to facilitate access to funding and provide clear guidance on eligibility; grant amounts, application process and timing. Clear, effective and timely communication about these aligned grant opportunities is requested.
Thank you,

Tracy Rulo
Fleet Services Project Manager
City of Naperville
Attached please find comments regarding the Volkswagen Environmental Mitigation Trust Agreement from the University of Illinois Hospital and Health Sciences System.

Thank you,

Emily Gibellina
Director of Government Relations for Healthcare
Office of the Vice Chancellor for Health Affairs

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April 20, 2018

Director Alec Messina
Director
Illinois Environmental Protection Agency
111021 North Grand Ave E
Springfield, IL 62702

Dear Director Messina,

On behalf of the University of Illinois Hospital & Health Sciences System (UI Health), I appreciate the opportunity to provide comments regarding the Volkswagen Environmental Mitigation Trust Agreement. UI Health includes a 465-bed acute care hospital, 22 primary and specialty care clinics, Mile Square Health Center (12 federally qualified health center locations) and seven health sciences colleges (medicine, nursing, pharmacy, dentistry, applied health sciences, social work and public health).

The implementation of the Volkswagen Environmental Mitigation Trust Agreement has the potential of dramatically reducing NO emissions in the state. The Illinois Environmental Protection Agency (IEPA) projects that NO emissions could be reduced by 1,800 tons per year with the implementation of the specific projects. The actual amount of reduction will depend on the number and type of projects funded and implemented. However, the Draft Beneficiary Mitigation Plan currently makes no mention of the potential health impacts that might occur with the implementation of the plan. NO emissions can exacerbate a number of acute and chronic conditions including asthma, chronic obstructive pulmonary disease, myocardial infarction, stroke and some cancers.

The University of Illinois at Chicago, through its school of Public Health, Cancer Center, Population Health Studies and Hospital, proposes the implementation of a series of health impact projects to assess the impact of the reduction in NO on the health and wellbeing of the residents of Illinois. Such studies are in line with the settlement’s goals of improving the air quality in Illinois.

The projects would focus on the IEPA’s three priorities areas:
- **Priority area 1:** Metropolitan Chicago (Cook, DuPage, Kane, Lake, McHenry, Will and portions of Kendall and Grundy Counties)
- **Priority area 2:** Metro-East/East St. Louis Metro area (Madison, Monroe and St. Claire Counties)
• **Priority Area 3: Rural Counties (Champaign, DeKalb, LaSalle, McLean, Peoria, Sangamon, and Winnebago Counties)**

Priority areas 1 is currently designated nonattainment for the 2008 ozone National Ambient Air Quality Standard of 75 parts per billion. The area also contains approximately 69.5% of the affected Volkswagen vehicles.

Priority area 2 is also currently designated nonattainment for the 2008 ozone National Ambient Air Quality Standard of 75 parts per billion and contains approximately 5.4% of the affected Volkswagen vehicles.

Priority area 3 is currently designated as adherent for the 2008 ozone National Ambient Air Quality standard of 75 parts per billion but contains 1% or greater of the affected Volkswagen vehicles.

UIC proposes utilizing data from ambient air quality monitoring and electronic medical records targeting the three IEPA priority areas to correlate the relationship between reductions in NO emissions and improved health impacts. Both ER and hospitalization data would be use for the following conditions: asthma, chronic obstructive pulmonary disease, myocardial infarction, stroke and cancer. The project would help the state to assess the impact of the emission mitigation projects along with determining where to target future resources. In addition, studies would promote the IEPA’s goal of achieving environmental justice for all communities by examining the correlation between health conditions and underserved populations. UIC would be the hub of these activities but would partner with other academic institutions in the implementation of the health impact projects. Funding for these projects would be between $7-11 million.

Including funding for a health impact studies would assure the IEPA and other decision makers that the projects reducing NO emissions are correlating with a demonstrable health effect. We appreciate the opportunity to provide comments on this very important topic. If you require additional information, or have questions, please contact Emily Gibellina, Director of Government Relations Healthcare at (312) 996 3615 or emilyg@uic.edu

Sincerely,

Robert Barish

Robert Barish MD, MBA
Vice Chancellor for Health Affairs
University of Illinois-Chicago
On behalf of Mayor William McLeod and the Village of Hoffman Estates, please see the attached comments on the Draft Beneficiary Mitigation Plan. Thank you for developing the draft and the change to provide input.

Mike

Michael Hankey, P.E.
Director of Transportation and Engineering Division
Village of Hoffman Estates

www.hoffmanestates.org
http://www.visithoffman.com/
Comments on VW Beneficiary Mitigation Plan
Village of Hoffman Estates
April 20, 2018

Submitted by:
William D. McLeod
Village President
bill.mcleod@hoffmanestates.org
847-781-2604

On behalf of the Village, I would like to offer the following comments on the Draft Beneficiary Mitigation Plan (BMP) prepared by the Illinois Environmental Protection Agency. Input from municipal representatives is critically important to consider as a final plan is created. Local public vehicle fleets, among the most visible and numerous diesel vehicles on the road, are found in every community. The residents and businesses in the non-attainment areas would benefit greatly from BMP efforts to make improvements throughout the region. Emissions from these diesel powered vehicles are among the more significant contributors to Nitrous Oxide (NOx) emissions. As such, more significant emphasis should be placed on funding projects related to upgrading diesel trucks used in municipalities. Several more specific points are offered for consideration as IEPA works to finalize the document.

- Targets in the draft BMP focus on Nitrogen Oxide (NOx) emissions and reductions. Additional evaluation of the positive impacts from reducing greenhouse gases should be included to supplement the analyses of benefits.

- A more balanced approach to allocating funds would direct a greater percentage of the funds towards “on road” projects such as upgrading municipal fleet vehicles. The program goal of reducing NOx would be more effectively addressed by focusing funding towards the “on road” fleet as these vehicles contribute much more significantly to Nitrogen Oxide (NOx) emissions than “off road” sources.

- Municipal fleet vehicles are more numerous and prevalent, especially in Cook County, than locomotives and other off-road sources. As engine technology changes on municipal diesel trucks can be accomplished at a fraction of the cost of locomotive engine projects, the mitigation dollars can be stretched further while realizing greater benefits. Improving performance of on-road vehicles, which contribute more to NOx emissions than off-road sources in a relative sense, equates to a much more cost-effective utilization of BMP funds – a larger beneficial reduction in the type of emissions which are the focus of the Consent Decree.
- The Village has previous experience with successfully completing a diesel retrofit and emissions reduction project. In 2010, CMAQ funds were awarded as a result of a Village application to implement different types of improvements for the diesel fleet of municipal vehicles. Two new trucks were purchased to replace ones with older diesel engines, three new and cleaner diesel engines were installed in Fire Department vehicles, and an additional twelve vehicles were outfitted with diesel oxidation catalysts to reduce tailpipe emissions. The total cost of all these elements was about $220,000 with the Village funding a twenty percent local match. The point is that projects like this which focus on municipal fleet diesel improvements can be very effective in addressing a number of sources of emissions at relatively low cost.

- An alternative distribution specifically for public transit buses and public Class 4-8 trucks should be considered as the allocations are re-evaluated. This category should include all public-sector vehicles, Class 4-8, including public transit and school buses. Proposers should have the flexibility within this category to determine the optimal clean fuel choice based on needs.

- Public fleets provide visible and essential public services to residents and businesses throughout the non-attainment areas, and specifically within the geographic target areas. Investment in cleaner municipal fleets provides local benefits and when aggregated across the region, at a much larger scale. Municipalities can model as the local leaders to inspire and encourage more broad selection of better environmental vehicle and fuel technology choices.

- The selection of projects to receive funding will be complicated. Consideration should be given on how to involve public sector representatives along with other stakeholders and topic area experts will participate in the process. The criteria used to evaluate proposals should prioritize options which maximize NOx reductions along with greenhouse gas. Cost effective use of these funds should also be documented to demonstrate benefits relative to costs. A means of equitably distributing funds among applications on a geographic basis could also be included to ensure that all areas within the affected regions benefit.

Thank you for the opportunity to submit comments on the Draft BMP. We look forward to hearing more about the program and actively participating in subsequent steps.
Brad,

Attached please find comments on the VW Settlement Beneficiary Mitigation Plan from Mark Fowler, Executive Director, Northwest Municipal Conference.

Ellen Dayan, CPPB
Purchasing Director
Northwest Municipal Conference

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April 20, 2018

Mr. Brad Frost  
Illinois Environmental Protection Agency  
Office of Community Relations  
1021 N Grand Ave E,  
Springfield, IL 62702

Dear Mr. Frost,

The Illinois draft Beneficiary Mitigation Plan (BMP) plan should have benefitted from input from a diverse array of informed stakeholders who can contribute to the successful mitigation of VW’s unlawful emissions in Illinois.

Other states began public engagement in late 2016 and throughout 2017. Illinois did not have a clear public engagement strategy prior to the release of the draft BMP in March 2108. Illinois is now upon the deadline to submit its draft BMP and it appears that funding allocations and expected outcomes are not optimized this draft plan. Therefore, a strong BMP that establishes clear, achievable, sensible and fair Eligible Mitigation Action (EMA) priorities that most benefit all impacted residents of Illinois, should be submitted by IEPA in a timely manner. Valuable stakeholder input should be formalized through a stakeholder advisory group that designs an effective grant/incentive program to implement the Illinois VW BMP. Such a stakeholder advisory group should also provide ongoing oversight of this grant/incentive program to allow for equitable and effective disbursement of Illinois VW Trust Funds in Illinois.

To shape this critical Illinois’ BMP we offer the following comments and recommendations:

1. Rationale behind proposed allocations

A. Broaden emissions reduction targets

Emissions targets in the draft BMP are fixed on Nitrogen Oxide (NOx) emissions, yet this should not be the exclusive focus of EMA’s in the final plan. The VW settlement offers an unprecedented opportunity to drive more sustainable fuel solutions, while handily meeting NOx reduction goals. NOx generated from the 23,600 non-compliant VW’s can be offset and other pollutants (Carbon Monoxide (CO), Hydrocarbons (HC), Particulate Matter (PM), etc.) and greenhouse gas emissions (GHGs) can and should also be reduced. Reducing GHG is an important concern among public agencies, and especially among the 85 communities in the non-attainment area that have formally supported the consensus sustainability goals of the Greenest Region Compact. Broadly addressing emission targets for long-term public health benefits is the most effective way to leverage VW Trust funding.
It is expected with implementation of proposed non-road EMA’s, that a diesel engine will be swapped for another diesel engine or repowered to reduce NOx emissions. However, this practice does little to reduce GHG emissions. These new or effectively new engines, will have an expected life span of 30 or more years for locomotives and 15 or more years for trucks. Unless the cleanest solutions within the EMAs are optimized, the opportunity to reduce greenhouse gases will be lost for these vehicles for a generation, or more. There is arguably a more urgent need for reduction of GHGs than NOx, and this VW Trust funding can. and should do both.

B. Focus on contributing emissions sources
Diesel vehicles are responsible for 29% of NOx emissions in Cook County, compared to only 3% of NOx emissions contributed by locomotives. The proposed allocation of 65% for non-road, which is understood to be predominantly locomotives, is not appropriately balanced to address NOx sources. Significantly greater allocation is needed to mitigate NOx contributions from diesel vehicles. The data source for the NO\textsubscript{x} Emission Inventory for Non-Attainment Criteria Pollutants is the Illinois Environmental Protection Agency’s Emissions Inventories, 2008 and Chicago Department of Environment, May 2010. While this available data is limited to Cook County, it represents a substantial proportion of the targeted region in the northeast non-attainment area.

C. Be transparent and consistent with assumptions
The amount of NOx produced by engines varies based on the parameters highlighted below (Item 2A). As these parameters influence the assumed NOx production, and therefore justification for funding allocations, the assumptions applied should be clearly provided by the IEPA in the final BMP. The draft BMP reports NOx reduction for on-road EMA’s @100 tons per year vs. non-road EMA’s @1700 TPY, which were ostensibly derived using the suggested DEQ or AFLEET tools. Based on cursory analyses using AFLEET, these NOx reductions seem to make assumptions that favor the non-road, compared to the on road. These assumptions also do not openly account for other pollution and GHGs and the costs to achieve these conversions. Assumptions for calculating expected results, and therefore allocations for all EMA’s must be consistently applied and openly disclosed.

2. Interpret the Consent Decree

The Consent Decree allows some latitude to IEPA (the Beneficiary) to interpret the parameters of the EMA’s to best enable eligible VW Fund applicants (public and private fleet managers, industry and other stakeholders) to deliver results for Illinois.
A. Define EMA’s by performance, not vehicle type
NOx reduction is a function of:
1) engine horsepower
2) operating hours
3) duty cycle
4) amount of fuel consumed
5) age of the engine being displaced/repowered
6) type of engine, fuel, and after-treatment being employed in the solution and
7) whether the change relates to locomotives vs. truck engines, which have different emission standards, and the emission standards that are being applied (e.g. Tier 0 vs. Tier 4).

NOx production is not generally related to whether the vehicle is used for freight hauling, construction, snow plowing, people-moving, fire-fighting, etc. The engine is the source of emissions. IEPA’s proposed interpretation of Class 4 to 8 should not determine if a vehicle is eligible or ineligible because it travels the interstate to deliver goods, mixes concrete, or provides services to the public, including protecting the public’s health and safety.

B. Consent Decree Definitions
The Consent Decree (Appendix D-1, Definitions) indicates what is included, by way of example, but does not explicitly exclude certain types of vehicles. The Consent Decree allows, EMA-6 “Class 4-7 Local Freight Trucks (Medium Trucks)” and EMA-1 “Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)” which should be interpreted to include vehicles that meet the performance definition and serve priority populations, identified in the draft BMP. This should include emergency-response vehicles and all public service vehicles in these vehicle classes. Strictly interpreting “freight” trucks might exclude public sector fleets that directly impact target populations.

The Consent Decree, Appendix D-1, defines eligible vehicles are model years 1992 to 2006, unless the Beneficiary provides additionally for model years 2007 through 2012. If these newer models are to be included it must be made clear in Illinois’ final BMP.

3. EMA Allocations

A. Reduce proposed allocations
The draft BMP proposed allocation of 65% for non-road applications (notably locomotion), 10% for electric buses and only 20% for all included public and private trucks (Class 4 to 8) overly favors non-road applications. Allocations in the final Illinois BMP should be substantiated based on issues raised above.

To be clear, the proposed allocation 65% for non-road is excessive. This is out-of-line with non-road allocations made by other states and fails to focus benefits on the target populations in Illinois. Further, US DOT has historically provided and currently provides CMAQ funds to subsidize cleaner locomotives. Reallocation VW funds more appropriately to diesel vehicles, Class 4-8 better serves IEPA’s stated BMP objective to “maximize and leverage funding”.
Further, the cost assumptions for the reduction in NOx for non-road and on road are not stated yet are very important to decision-making. The cost to make a single locomotive Tier 4 from Tier 0 can cost between $2.5 and 7 million each, depending on whether a new engine or a repowered engine is applied and whether an alternative fuel to diesel is applied. Typical costs to change a truck to cleaner vehicles range from $20,000 to $100,000, depending on a range of factors. For the low end of the truck range ($20,000), this translates into 125 to 350 trucks for every locomotive, from a grant funding perspective.

The proposed allocation of 10% for all electric school buses is not substantiated by performance or cost-effectiveness. According to IEPA’s own website, electric school bus engines are shown to have the lowest potential emissions reductions of all EMA’s. While the BMP estimates performance outcomes for both on-road projects (100 tons NOx/year) and off-road projects of 1,700 tons NOx/year), there is no estimate provided for the reduction potential for conversion to all electric school buses. From proposed allocations, cost per ton of NOx reduced can be estimated for on-road projects (EMA 1, 2 and 6) at 0.217 $/MM/ ton; and non-road projects (EMA 3 and 4) at 0.042 $/MM ton. This comparison cannot be calculated for all electric school buses and this proposed carve-out is unsubstantiated based on the goal of NOx reduction.

B. Establish a public-sector allocation
A more equitable and effective carve-out should also include public transit buses and public Class 4-8 trucks which show greater potential for emissions reduction than school buses. This allocation category should include all public-sector vehicles, Class 4-8, including public transit and school buses should total 30% and should allow applicants to determine the optimal clean fuel choice for their use.

C. Use DERA funds
As stated, under EMA 10, Diesel Emission Reduction Act (DERA) funds may be leveraged for replacement or repower of passenger locomotives. This same process should be applied to truck engines within the DERA definitions for eligible Class 4 through 8 vehicles. This would leverage matching DERA funding to allow more public fleets to participate in the greening of their fleets.

4. Invest in Municipal Fleets
It is important to prioritize municipalities as beneficiaries of VW mitigation funds for many reasons. Public fleets provide visible and essential public services to residents equitably throughout the non-attainment area, and specifically within target areas of VW ownership and environmental justice priorities. Investment in cleaner municipal fleets provides demonstrable localized benefits. Municipalities are trusted to make decisions for public benefit, including choices for safe, sustainable public fleets. The visible nature of investment in public fleets will provide corresponding momentum for the growth and acceptance of greener fuel choices throughout the non-attainment area.

Municipalities are prepared to participate in vehicle conversions that will help achieve target emission reductions. The Municipal Fleet Managers Association is well-versed
in alternative fuel technologies and supports transition to cleaner fuels for appropriate public service vehicles. Eighty-five Greenest Region Compact communities formally support the goal to “operate a safe, clean and efficient fleet”.

Further, incentives are more critical to assure public fleet success than they are for private and non-road sectors. Municipal fleets do not generate revenue that can support cleaner fuel conversions and they are allowed neither tax incentives nor depreciation allowances available to private fleets. There is comparatively lower mileage and fuel use for most public fleets, making adequate return on investment difficult to achieve, despite strong localized public benefit.

5. Allocate for Light-Duty EV Charging Infrastructure

The Consent Decree allows an allocation of 15% for light-duty electric vehicle supply equipment (EVSE). So far, ten other states have allocated the full 15% for EVSE and three more states have allocated more than 10% for EVSE. Municipalities are strongly supportive of investment in EV charging infrastructure that is widely accessible through public, workplace and multiple-unit dwelling installations. Again, Greenest Region Compact communities support accessible, sustainable transportation networks and therefore we request the full, allowable allocation of 15% for light-duty EVSE.

In the draft BMP, IEPA has justified investment EVSE installation only when associated with the electrification of vehicles in the other EMA categories to prevent ‘stranding’ of EVSE assets. Such concerns can be mitigated in a grant/incentive evaluation process that requires guaranteeing usage of the EVSE.

6. Design an Effective Grant/Incentive Program

The strategic disbursement of VW Trust Fund monies to achieve Illinois EPA’s goals, comply with the Consent Decree and best leverage the opportunities for collaborating with many stakeholders is indeed a challenge. However, the VW Mitigation Trust provides an unprecedented opportunity to support clean, sustainable transportation; boost sustainable industries; and make strides to protect public health through improved air quality. It is essential to design an effective grant/ incentive program that optimizes Illinois’ strengths and most effectively serves its needs.

A. Advisory Group
A broadly inclusive and knowledgeable advisory group that includes public sector representatives and alternative fuel experts is needed to oversee the development of the grant/incentive program and implementation strategies. This advisory group should be involved in the design of the IEPA’s VW Trust grant program to assure fund disbursements achieve emission-reduction targets, and appropriately serve target populations and objectives.

B. Application scoring to achieve objectives
Priority outcomes, to be met by strategically scoring applications and disbursing fund include:
Prioritization of the cleanest, most beneficial choices within the EMA’s

- Emissions reduction
  - NOx Reduction
  - Other criteria pollution reduction (CO, HC, PM, etc.)
  - Greenhouse gas reduction

- Technology choices
  - Whether converting from diesel Tier 0 through 3 up to Tier 4 diesel
  - Whether converting to alternative fuel over conversion to cleaner diesel
    - Alternative fuels including natural gas (CNG), propane, and biofuels
  - Use of Electrification or Hydrogen (Zero Emission Vehicles)
  - Use of Hybridization

- Prioritization to serve target populations
  - Non-attainment areas
  - Environmental justice communities
  - Eligible VW vehicle ownership communities
  - Demonstrable public benefit

C. Fair grant process

A competitive grant process that allows public agencies to participate fairly, is needed. Vouchers that facilitate expeditious public procurement of clean vehicles, are preferred. A competitive process with ample, defined grant award and contracting cycles, is needed to allow public sector fleets to complete transparent, public procurement processes and allow them fair access to funds. Truck safety equipment should be required for all grant disbursements, such as truck sideguards and crossover mirrors to further enhance the public health benefits.

Tiered incentives rates can stretch VW Trust Funds. Maximum grant fund reimbursement rates should be provided to highest performing projects, while lower reimbursement rates can be provided to less-impactful, but valuable public-sector projects. Proposed reimbursement rates of 75% do not adequately share benefits among public agencies as well as more modest reimbursements would.

7. Improve and align all green fleet programs

VW Trust Funds can complement existing green fleet grant programs to leverage support for comprehensive transition to cleaner fuels and provide greater air quality benefits to targeted populations. The two active programs funded by US DOT’s Congestion Mitigation and Air Quality program, (CMAQ) for vehicles – Chicago Area Green Fleet Grant Program and Drive Clean Chicago are important complements to the VW Trust funded-grant program. Notably, Drive Clean Chicago serves Class 2-3 vehicles, which are not eligible under VW Trust, but desirable targets for emission reducing strategies. Successful elements of these existing programs, such as vouchers can be retained. Unsuccessful elements, such as prolonged approval times, should be improved.
Strategic alignment of these programs is essential and should be done through the appropriate IEPA office that is best suited to provide technical assistance, efficient grant-making, and effective outreach.

All IEPA green fleet programs should be managed through a streamlined single website portal to facilitate access to funding and provide clear guidance on eligibility; grant amounts, application process and timing. Clear, effective and timely communication about these aligned grant opportunities is requested.

Sincerely,

Mark L. Fowler
Executive Director

cc: Edith Makra, Metropolitan Mayors Caucus
    Director of Environmental Initiatives
To the Illinois EPA:

Please find attached General Motors’ comments relative to the Illinois Draft Beneficiary Mitigation Plan. We would like to encourage the EPA to firmly commit to allocating the full 15% of the state’s trust funds for light duty vehicle charging infrastructure. This is a critical opportunity to invest in forward-looking technologies that will shape a mobility strategy for the state that includes innovative and advanced mobility solutions, such as car-sharing, ride-hailing, and autonomous vehicles, that will be based on electric vehicle technology platforms.

GM greatly appreciates Illinois’ commitment to support the strategic transition to transportation electrification and all efforts to help drive this emerging market!

Regards, Britta

Britta Gross
Director, GM Advanced Vehicle Commercialization Policy

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20 April, 2018

Illinois Environmental Protection Agency
EPA.VWSettlement@illinois.gov

Subject: GM Comments relative to the Illinois Draft Beneficiary Mitigation Plan

General Motors LLC (GM) appreciates the opportunity to provide input on the proposed use of funding in the state’s Draft Beneficiary Mitigation Plan and would like to encourage Illinois to firmly allocate the maximum allowed 15% of the fund (equating to approximately $16mil) to increase the availability of critically-needed electric vehicle (EV) charging stations that will drive a forward-looking technology and mobility strategy for the state. Such a vision will be required to attract EVs and even more advanced transportation technologies to the state, such as self-driving EVs in shared mobility applications, that are key to future mobility. There are over 15,000 EVs registered in Illinois today and only 29 DC fast-charging stations in the state (the vast majority located in Chicago), and in order to grow the EV market and attract increasingly advanced mobility solutions, Illinois needs to commit to an investment in a charging infrastructure network that addresses consumer and industry concerns.

EV charging infrastructure today has not attracted sufficient investment to establish a compelling foundation of EV charging stations. This market will become more viable and competitive over time, but this early market currently requires additional investment to close the infrastructure gap and establish a network of charging stations that is highly visible to consumers and drives consumer-confidence in the ability to drive EVs anywhere in the state. Even the planned investments by Electrify America in Illinois will not be enough to satisfy the infrastructure needs. According to NREL’s National PEV Infrastructure Analysis* (September, 2017), Illinois will be home to an estimated 555,000 plug-in EVs by 2030, requiring 880 DC fast-charging stations, 13,600 workplace chargers, and 8,700 additional public Level 2 charge stations. This need requires an up-front strategy and firm investment plan to ensure that Illinois is prepared for the mobility transformation. Electrify America’s contribution in Illinois is key, but it currently represents fewer than a dozen DC fast-charge sites across the entire state (with some additional urban charging in Chicago) - far less than what is required to meet current and future demands, which include innovative and advanced mobility solutions, such as car-sharing, ride-hailing, and autonomous vehicles, that will be based on electric vehicle technology platforms. The ability to introduce and grow these advanced mobility services relies on a robust foundation of EV charging infrastructure, especially DC fast-charging.
Automakers have made enormous investments in the electrification of transportation – GM alone has invested billions of dollars to develop electrification technologies, including the state-of-the-art Chevrolet Volt and Chevrolet Bolt EV, which has swept the industry’s most prestigious car awards, including North America Car of the Year, Motor Trend’s® 2017 Car of the Year, MotorWeek's 2017 Drivers’ Choice “Best of the Year” Award, and Green Car Journal’s Green Car of the Year. The Bolt EV is the industry’s first affordable, long-range EV with an EPA estimated range of 238 miles-per-charge, and is available now at Chevrolet dealers across Illinois. This advanced technology will require more widespread charging infrastructure to convince consumers that EVs can be driven anywhere they need to go. Thus, the urgency to rapidly expand EV charging infrastructure in Illinois.

While the majority of all EV charging today is done at the home, there are still critical infrastructure needs not met by single-family home charging. And to maximize the impact of limited state funds, it is important to invest strategically. GM would prioritize today’s key infrastructure needs as follows:

1. **Highway corridor DC fast-charging** most visibly inspires consumer confidence in the driving range, and practicality, of EVs. A 2016 survey of 2,500 consumers by Altman Vilandrie & Company found the top reason customers gave for not wanting to purchase a plug-in electric vehicle was a perceived lack of charging stations (85%). Highly visible corridor EV charging (SAE industry standard) can help address this consumer perception issue.

2. **Workplace EV charging** creates an EV “showroom” that very effectively grows EV awareness among corporations, and employees of these corporations. According to US DOE data, workplace charging results in employees 6X more likely to purchase an EV than employees at companies not offering workplace charging.

3. **Multi-unit dwelling EV charging** provides an important opportunity to expand EV adoption to consumers residing in townhomes, condominiums, and apartments, who may not have access to a “home” charger every evening. This is currently an untapped segment of potential EV buyers. This need can be met by Level 1 or Level 2 charging directly at the multi-unit dwellings, or by neighborhood DC fast-charge hubs that can serve these residents.

4. **Public EV charging at key destinations** is also important to increase the practicality of EVs and the number of places an EV can go, with a special focus on destinations typically outside a consumer’s normal daily driving patterns (e.g. airports, beaches, hotels, resorts, etc.).

5. **Urban core DC fast-charging** is critical to attracting and supporting high-mileage commercial mobility solutions such as car-sharing, ride-hailing, and autonomous vehicles as both peo-ple-movers and in goods movement.

EV charging infrastructure is vital to the growth of the EV market and will lead to long-lasting emissions reductions that increase over time as the market expands. And Illinois’s low electricity prices mean that electric vehicles are an important economic driver for Illinois. Illinois can increase the impact of these investments by directly engaging electric utilities in the strategic planning of EV infrastructure to ensure the most cost-effective and grid-responsible EV charging solutions.
The VW Environmental Mitigation Trust is an opportunity to invest in forward-looking infrastructure that lays a much-needed foundation for EV market growth and will help attract even more advanced transportation technologies to Illinois. GM greatly appreciates Illinois’s commitment to support the strategic transition to transportation electrification and all efforts to help drive this emerging market.

Sincerely,

[Signature]

Britta K. Cross, Director
Advanced Vehicle Commercialization Policy

April 20, 2018

VIA ELECTRONIC MAIL

Mr. Alec Messina
Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794
EPA.VVSettlement@illinois.gov

Comments on the Illinois Volkswagen Settlement Draft Beneficiary Mitigation Plan

Introduction

The Natural Resources Defense Council (NRDC) thanks the Illinois Environmental Protection Agency (IEPA) for the opportunity to comment on the Illinois Draft Beneficiary Mitigation Plan (BMP), released for comment on February 27. NRDC provides the following recommendations on the use of the $108.7 million in funds that the state of Illinois received from the environmental mitigation trust (EMT) established by the Volkswagen (VW) consent decree. In brief, the EMT presents a significant opportunity for Illinois to reduce harmful nitrogen oxide (NOx) emissions and particulate matter (PM), especially in environmental justice communities that bear disproportionate pollution burdens, reduce the state’s dependence on petroleum-based fuels, and modernize Illinois’s transportation sector. The VW EMT
should be allocated to support a critical transformation of the transportation sector from petroleum-based fuels, to clean electricity in Illinois. This transformation should meaningfully reduce transportation emissions, particularly for communities that are disproportionately burdened by pollution. We recommend that the IEPA incorporate the following in its next revision to the BMP:

1) Invest the full 15 percent on light-duty zero emission supply equipment
2) Create a specific allocation for overburdened environmental justice communities
3) Establish a formal, more iterative stakeholder process
4) Revise the current online VW survey

Comments on Draft Beneficiary Mitigation Plan

As a member of the Charge Up Midwest coalition, NRDC has been active in developing policies at the intersection of transportation electrification and utility regulation in Michigan, Minnesota, Missouri, and Ohio. We are a signatory to a settlement with American Electric Power Ohio that would invest $10 million to deploy almost 400 charging stations across the state. NRDC is involved within the Missouri EV Collaborative, a multi-stakeholder electrification group, that has provided comments to the Missouri Department of Natural Resources, recommending the creation of a direct current fast charging (DCFC) network across the state. We have also advised the Michigan Public Service Commission and the Minnesota Public Utilities Commission in their efforts to advance transportation electrification.

While these comments focus on deficiencies in the draft plan, we commend the IEPA on their $10 million carve out for electric school buses. In comparison to other Midwestern states, Illinois’ beneficiary mitigation plan provides the largest dedicated funding allocation for zero emission vehicles serving the youth population.¹ School buses provide an excellent use-case for medium-duty battery

electric vehicles: low speed, and low torque scenarios show significant emission reductions compared to
diesel.² Zero emission school buses will ensure that fewer children will suffer from asthma attacks and
respiratory diseases caused by exposure to harmful diesel air pollution. These reductions will not only
help protect our children, but also ensure fewer sick days in school districts across the state and fewer
days of missed work for parents.³ Currently, electric school bus models are offered by four companies –
Blue Bird, eLion, Trans Tech, and Starquest.⁴ However, Illinois should further its commitment to zero
emission vehicles beyond the school bus segment, as recommended below.

1) IEPA should dedicate fifteen percent (or $16.2 million), the maximum amount allowed,
towards light-duty plug-in electric vehicle charging stations, because EVs are the most
promising way to reduce NOx emissions from the single largest mobile source.

An investment in light-duty charging infrastructure with EMT funds will help narrow the existing
EV infrastructure gap and will put Illinois on the path towards long-term emissions reductions, as light-
duty vehicles are the largest single source of mobile source NOx emissions in the state.⁵ When charging
on the electrical grid in Illinois, EVs will have 40 percent fewer lifecycle NOx emissions than the typical
gasoline vehicle within two years.⁶ Thus, near-term investments in EV infrastructure will deliver
immediate benefits to Illinois and deliver future emissions savings.

Based on an analysis by the National Association of State Energy Officials and the National
Association of Clean Air Agencies, the plurality of NOx emissions in Illinois comes from on-road light-duty
vehicles (28 percent, 84,000 tons) followed by on-road heavy-duty vehicles (27 percent, 79,000 tons),
while locomotives contribute just under 15 percent of total mobile NOx emissions (See Figure 1).⁷ These

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⁵ http://www.vwwclearinghouse.org
⁶ Analysis by Atlas Public Policy using Argonne National Laboratory’s GREET model v1.3.0.13239
⁷ https://vwwclearinghouse.org/
numbers demonstrate the need to prioritize emissions coming from on-road sources and the greater potential to see improved air quality by investing charging infrastructure for light-duty vehicles. Light-duty EVs reduce NOx emissions by 50-90 percent per gasoline vehicle replaced.\textsuperscript{8}

<table>
<thead>
<tr>
<th>Mobile Source Tons of NOx Emissions by Sector</th>
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<tbody>
<tr>
<td>Aircraft 6K (2%)</td>
</tr>
<tr>
<td>Locomotives 44K (14.88%)</td>
</tr>
<tr>
<td>Non-Road Equipment 67K (22.48%)</td>
</tr>
<tr>
<td>On-Road Light-Duty Vehicles 84K (28.23%)</td>
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<tr>
<td>On-Road Heavy-Duty Vehicles 79K (26.77%)</td>
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\textit{Figure 1: Illinois Mobile Emissions}

Illinois needs more light duty vehicle charging stations. An analysis performed by MJ Bradley and Associates estimates there are about 12,300 EVs in Illinois today.\textsuperscript{9} There are only 391 public charging stations with 847 charging outlets in the state of Illinois, and the vast majority of those are “Level 2” stations only suitable for long-dwell time locations where cars are parked for many hours.\textsuperscript{10} Further, fast charging barely exists in Illinois. Only two public DCFC charging locations in Illinois have more than one charging port of the same connector (see Figure 2).

\footnotesize{\textsuperscript{8}http://www.swenergy.org/data/sites/1/media/documents/publications/documents/2017_EV_Emissions_Update_Wasatch_Front_Jan-2017.pdf}
\footnotesize{\textsuperscript{9}https://mjbradley.com/sites/default/files/IL%20PEV%20C%20Analysis%20FINAL%2026sep17.pdf}
\footnotesize{\textsuperscript{10}https://www.afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC, April 18, 2018}
Second-generation electric vehicles such as the Chevrolet Bolt EV, which offer longer ranges at affordable price points are now available, but the lack of robust public charging infrastructure could inhibit mass adoption. Without more charging stations, some Illinois citizens will be reluctant to purchase EVs. Studies have shown that the availability of public EV charging infrastructure is a key driver of EV adoption in metropolitan regions.\textsuperscript{11} Prospective EV owners will be hesitant to purchase EVs unless they are certain that there is an adequate public charging network available, and private companies and utilities will not invest in EV charging infrastructure unless they are certain there is an adequate market to make a reasonable profit. Reliable access to fast charging will need to exist for long-range EVs to compete with gasoline vehicles, and today’s infrastructure is not up to the challenge. A $16.2 million investment in light-duty charging infrastructure could play a key role in jumpstarting the transportation electrification market. Over 70 percent of states with beneficiary mitigation plans have

\textsuperscript{11} https://www.theicct.org/sites/default/files/publications/EV-charging-best-practices_ICCT-white-paper_04102017_vF.pdf
already made this commitment by designating the full 15 percent towards EV infrastructure, including Michigan, Minnesota, Missouri, and Ohio.

While Electrify America has targeted the Chicago metro area to deploy approximately $13 million worth of charging stations, it will only provide a small share of the infrastructure necessary to increase EV adoption in the region and will not provide infrastructure in much of the rest of the state. More money is needed from the EMT to help narrow the gap of EV charging infrastructure, especially in areas that will not be served by Electrify America’s nascent deployment. To this point, Electrify America has only identified seven DCFC charging hubs and approximately twenty Level 2 charging hubs in multi-unit dwellings and workplaces across Chicago. Although Electrify America hopes to eventually install an additional 100-200 charging outlets within the greater Chicago area, the state of Illinois will still need at least 23,000 charging outlets by 2030, over 20 times the amount the state currently has in addition to the tentative Electrify America commitment. Even with investments from Electrify America, there is still a long way to go to satisfy future charging needs.

Electrify America also has no public obligation to serve disadvantaged communities. Of the seven proposed charging hubs, five have been designated within suburbs outside of Chicago. In addition, Electrify America will likely target the most profitable locations first, potentially shutting out the neighborhoods that are most affected by diesel-related pollution from considering EVs. Although Electrify America has pledged to install four multi-unit dwelling charging hubs, it is not nearly enough for the Chicagoan population since 60 percent of Chicagoans live in multi-unit dwellings. Within this planning framework, most residents are not accounted for, particularly low-income residents who in many cases live in these multi-unit dwellings. Electrify America’s network, which is focused around the Chicago metro area will also leave large swaths of the state underserved. We recommend the IEPA

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6 https://www.nrel.gov/docs/fy17osti/69031.pdf
dedicate the full 15 percent towards EV charging infrastructure to jumpstart the incoming EV market. Funds should be used to create a practical charging corridor throughout the state to address the “range anxiety,” so that no driver is afraid of running out of fuel no matter where they are in the state. To stretch Environmental Mitigation Trust dollars further, we strongly recommend IEPA seek to partner with the state’s electric utilities, which are well situated to provide supporting electrical infrastructure, allowing IEPA to create a more robust network as a result.

This is in line with what other states are doing. For example, the Missouri EV collaborative released a joint proposal for VW funds to create a minimum practical charging network across the entire state with an estimated cost of $6.8-14.4 million with the cost split among utilities, nearby communities, and VW funds (See Figure 3). And in Michigan, the Charge Up Midwest coalition also proposed a similar plan at the Public Service Commission’s EV Technical Conference. By collaborating with these nearby states that have already shown interest in a network, Illinois could partner with its electric utilities and private companies to help create a Midwestern EV corridor to allow EV drivers to travel from state to state without the fear of running out of fuel.
2) IEPA should clarify how it will prioritize underserved areas and should consider criteria to target areas that are cumulatively burdened by poor socio-economic conditions along with regional and local air pollution and other environmental factors.

IEPA should provide greater specificity as to how the plan will reduce air pollution in environmental justice communities and prioritize addressing pollution in communities facing the greatest cumulative burdens beyond what is currently proposed. IEPA has designated three large priority areas within the state, but more granularity is needed to ensure that funds will drive change in the localities within these areas that are most burdened by the cumulative impacts of pollution. The set of criteria IEPA used to identify priority areas do not fully encapsulate the environmental justice problems associated with diesel vehicles that are compounded by poor socio-economic status and other vulnerabilities. Within the Chicagoland area, which is designated as nonattainment for ozone, the areas with the most VW registrations do not correlate with such environmental justice areas. Thus, even though reductions in NOx levels in one part of the ozone nonattainment area can positively affect ozone

Figure 3: EV Collaborative Proposal for Statewide Charging Network
levels in nearby burdened areas, only targeting such reductions will not effectively address local pollution burdens from diesel vehicles that fall disproportionately on low-income communities and communities of color and contribute to the high cumulative burdens faced by these communities.

IEPA should make specific investments in overburdened communities that suffer from high levels of NOx, PM, and other harmful diesel-related emissions as well as other sources of pollution, and that are most vulnerable to the negative impacts of pollution, to achieve the greatest overall benefit to environmental justice communities. Such an approach will not only reduce ozone regionally, but also benefit vulnerable communities saddled with disproportionate burdens linked to diesel vehicles.

NRDC specifically recommends that the IEPA consider delegating funds to specific communities based on cumulative impacts analysis consistent with the state’s definition of an environmental justice community. Cumulative impacts analysis does not focus on one or a handful of environmental exposure metrics in isolation, but instead takes a more comprehensive look at pollution and community vulnerability factors to assess the areas most burdened by environmental pollution. For example, Figure 4 is a map generated by using US EPA’s EJSCREEN tool that considers only levels of diesel PM, as block group percentile rankings relative to other block groups in Illinois.\(^{13}\) With this limited picture, the Downtown Loop area and major highways are highlighted as “overburdened communities.” Yet, this simplification does not encapsulate the populations that are most greatly impacted by diesel pollution from a cumulative view. The Downtown Loop area is a primarily commercial sector that amasses large amounts of air pollution due to daily commuting. Low-income residential communities of color outside of downtown and along highway corridors, in contrast, bear a significantly larger environmental and socio-demographic burden, of which diesel air pollution is a significant part.

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\(^{13}\) A similar picture would result from mapping solely vehicle-related NOx emissions in the Greater Chicago area. (Note that EJSCREEN does not include a NOx-ozone indicator; its contribution is only captured in the general ozone indicator, the modeling of which is dominated by regional patterns.)
Figure 4: Diesel PM indicator in Chicago, US EPA EJSCREEN 2017

By incorporating a wider set of vulnerability factors, high priority areas within the Chicago region shift. Figure 5 below, also generated using the EJSCREEN tool, depicts an indicator called the EJ index for diesel PM. This index, created by the US EPA, combines information on diesel PM levels with rates of poverty and percentage of minority population, based on the understanding that socio-demographic factors can combine with environmental exposures to produce heightened vulnerability. Thus, in the more comprehensive picture shown in Figure 5, areas cumulatively burdened by diesel PM and population vulnerability (as captured by minority and poverty status) lie outside of downtown, in West Chicago, along the I-55 corridor, and in the Calumet region in particular along highway routes.
Figure 5: Diesel PM Environmental Justice Index in Chicago, US EPA EJSCREEN 2017

The differences between the two preceding figures illustrate the importance of considering socio-demographic factors that can heighten vulnerability, along with environmental exposures. US EPA's EJSCREEN tool can be a starting point for such a cumulative impacts approach. To best leverage the tool to identify priority areas for present purposes, we recommend considering not only US EPA's EJ index for diesel PM, but also the other ten EJ indices provided by the tool. These other indices cover a range of environmental exposures that also contribute to the cumulative pollution burden (such as traffic proximity and hazardous facilities). Similarly, although the formula for deriving EJ indices in EJSCREEN only incorporates poverty and minority status as population information, additional socio-
demographic indicators (such as educational attainment, population under age five, and population over age 65) are available through the EJSRCEN tool and should be considered as well. Further, environmental and population information available only in Illinois (and therefore excluded from US EPA’s EJSRCEN) should also be taken into account. In this regard, we understand that the IEPA is currently exploring the development of a state-level environmental justice screening tool. We support that endeavor and the new tool’s use to the extent possible here.

In addition to taking a cumulative impacts perspective to identify target areas, IEPA should prioritize vehicle types that most adversely affect local conditions to best address the contribution of air pollution to cumulative impacts in these areas. Within the areas that stand out from a cumulative burdens perspective, we recommend investment in, for example, cleaning up the medium- and heavy-duty trucks that pass through these communities on a daily basis and can cause significant diesel particulate matter hot spots. Light commercial urban delivery vans, medium-duty regional delivery trucks, and refuse trucks are all promising targets for electrification within these overburdened areas. The low speed of these vehicles eases battery requirements in addition to their stop and go routes allows for greater fuel efficiency through regenerative braking, further improving the technology’s effectiveness in reducing harmful pollution.

3) IEPA should establish a formal stakeholder process and seek continual improvement through cycles of funding and feedback.

Other states in the Midwest have established forums and begun formal discussions on how to allocate their respective EMT funds with some states such as Minnesota taking over a year to gather

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input before drafting its BMP. To provide transparency and opportunity for all stakeholders to comment, Illinois should initiate a similar process.

The Missouri Department of Natural Resources (MoDNR) created a VW Trust Advisory Committee that held meetings to gather input prior to writing the draft plan. The committee was voluntary and open to anyone with an interest. In addition, MoDNR set up two different surveys to gather feedback for their recent beneficiary mitigation plan. The first asked for feedback on the overall goals of the plan, much like the IEPA is doing, and the second requested comments on implementation guidelines. Specifically, the MoDNR asked for comments on selection process, target areas, contingencies, and timing of awards and fund disbursement. The Minnesota Pollution Control Agency (MPCA) divided VW funds into three different phases between 2018-2027 with specific allocations per phase. The plan itself only focused on funding for Phase 1 (2018-2019) so that the MPCA can gather public input and overall learnings to inform the next round of funding. Based on this structure, the Minnesota VW plan has built in transparency and frequent project evaluation to modify allocations to best suit the state. The Ohio Environmental Protection Agency also created a provision within its beneficiary mitigation plan, which actively seeks revision. In the case that a major revision is a necessary at any point in the ten-year period, a public notice will be sent to various stakeholders, and the agency will enact a 30-day public comment period.

IEPA should set up a formal process for parties to share input and ensure that the final plan reflects the perspectives of Illinois stakeholders, particularly those representing communities most affected by long-term transportation pollution. In addition, a phased funding structure should be more

16 https://www.pca.state.mn.us/sites/default/files/aq-mvp2-32c.pdf
17 https://www.surveymonkey.com/r/Implementationguidelines
18 https://www.pca.state.mn.us/sites/default/files/aq-mvp2-32a.pdf
explicitly established to ensure that the plan goes through multiple iterative periods that guarantee the most optimal use of the VW funds.

4) IEPA should revised the current VW survey or create another survey to elicit more robust feedback.

The current survey fails to provide stakeholder an adequate forum to elicit public feedback and should be modified or overhauled to better reflect a more diverse set of opinions. Although the survey asks 22 questions, almost half of them are only available to participants that plan to propose a project. With such a setup, the survey will greatly favor those proposing projects over all other participants, especially those within low-income communities.

Several of the questions often pigeonhole the possible answers a participant can give and do not encompass the complexity involved with these issues. Four questions require a participant to choose only one “top priority.” One question asks the participant to choose their top impacted community, but this question places the participant in a position to ultimately prioritize certain communities over others. In addition, some of the selections for this question are intertwined with each other, but there is no option to select more than one. Rather than ask the participant to pick only one top choice, a checklist function could be implemented to allow a participant the option to select more than one option per question. An “other” category should be included in each of these questions in the case that the participant would like to offer another alternative.

After the release of its VW plan, the MoDNR created two surveys to elicit feedback. Based off these surveys, we suggest that the IEPA consider including a final question that asks the participant for free-response comments and final thoughts. We also recommend that the IEPA include more clarity in its questions with specific regard to ones that ask about category funding allocations and geographical


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preferences. One of the MoDNR surveys asks participants to write down their ideal allocation spread amongst the various vehicle types and geographical zones across the state. The IEPA VW survey should include more freedom to offer general input and reasoning for decisions, as well as more clarity on the existing questions and how they specifically relate to funding allocations and geographical preference.

Conclusion

Illinois’s portion of the overall EMT presents the state with a significant opportunity to reduce its transportation sector emissions now and for decades to come. The state should seek to make an impact that can be long lasting and transformative. By funding widespread electrification and charging infrastructure and specifically targeting underserved areas through a set carve out of VW funds, the IEPA has the potential to initiate changes that make the most impact for the state.

To ensure the robust participation of all interested parties and those that expect to submit funding proposals, a more collaborative and iterative process of developing a final plan should be implemented in the long-term. We look forward to working with the IEPA and all associated stakeholders in the future.

Respectfully submitted,

Aloysius Makalinao
Schneider Fellow

Elizabeth Toba Pearlman
Staff Attorney/Clean Energy Advocate, Midwest Region
April 20, 2018

Director Alec Messina
Director
Illinois Environmental Protection Agency
111021 North Grand Ave E
Springfield, IL 62702

Dear Director Messina,

On behalf of the University of Illinois Hospital & Health Sciences System (UI Health), I appreciate the opportunity to provide comments regarding the Volkswagen Environmental Mitigation Trust Agreement. UI Health includes a 465-bed acute care hospital, 22 primary and specialty care clinics, Mile Square Health Center (12 federally qualified health center locations) and seven health sciences colleges (medicine, nursing, pharmacy, dentistry, applied health sciences, social work and public health).

The implementation of the Volkswagen Environmental Mitigation Trust Agreement has the potential of dramatically reducing NO emissions in the state. The Illinois Environmental Protection Agency (IEPA) projects that NO emissions could be reduced by 1,800 tons per year with the implementation of the specific projects. The actual amount of reduction will depend on the number and type of projects funded and implemented. However, the Draft Beneficiary Mitigation Plan currently makes no mention of the potential health impacts that might occur with the implementation of the plan. NO emissions can exacerbate a number of acute and chronic conditions including asthma, chronic obstructive pulmonary disease, myocardial infarction, stroke and some cancers.

The University of Illinois at Chicago, through its school of Public Health, Cancer Center, Population Health Studies and Hospital, proposes the implementation of a series of health impact projects to assess the impact of the reduction in NO on the health and wellbeing of the residents of Illinois. Such studies are in line with the settlement’s goals of improving the air quality in Illinois.

The projects would focus on the IEPA’s three priorities areas:

- **Priority area 1**: Metropolitan Chicago (Cook, DuPage, Kane, Lake, McHenry, Will and portions of Kendall and Grundy Counties)
- **Priority area 2**: Metro-East/East St. Louis Metro area (Madison, Monroe and St. Claire Counties)
• **Priority Area 3:** Rural Counties (Champaign, DeKalb, LaSalle, McLean, Peoria, Sangamon, and Winnebago Counties)

Priority areas 1 is currently designated nonattainment for the 2008 ozone National Ambient Air Quality Standard of 75 parts per billion. The area also contains approximately 69.5% of the affected Volkswagen vehicles.

Priority area 2 is also currently designated nonattainment for the 2008 ozone National Ambient Air Quality Standard of 75 parts per billion and contains approximately 5.4% of the affected Volkswagen vehicles.

Priority area 3 is currently designated as adherent for the 2008 ozone National Ambient Air Quality standard of 75 parts per billion but contains 1% or greater of the affected Volkswagen vehicles.

UIC proposes utilizing data from ambient air quality monitoring and electronic medical records targeting the three IEPA priority areas to correlate the relationship between reductions in NO emissions and improved health impacts. Both ER and hospitalization data would be use for the following conditions: asthma, chronic obstructive pulmonary disease, myocardial infarction, stroke and cancer. The project would help the state to assess the impact of the emission mitigation projects along with determining where to target future resources. In addition, studies would promote the IEPA’s goal of achieving environmental justice for all communities by examining the correlation between health conditions and underserved populations. UIC would be the hub of these activities but would partner with other academic institutions in the implementation of the health impact projects. Funding for these projects would be between $7-11 million.

Including funding for a health impact studies would assure the IEPA and other decision makers that the projects reducing NO emissions are correlating with a demonstrable health effect. We appreciate the opportunity to provide comments on this very important topic. If you require additional information, or have questions, please contact Emily Gibellina, Director of Government Relations Healthcare at (312) 996 3615 or emilyn@uic.edu

Sincerely,

Robert Barish

Robert Barish MD, MBA
Vice Chancellor for Health Affairs
University of Illinois-Chicago
Brian Urbaszewski,  
Dir of Environmental Health Programs  
Respiratory Health Association

RHA's mission is to prevent lung disease, promote clean air, and help people live better through research, advocacy and policy change.

Thank you for opportunity to speak tonight and for holding this spending plan public hearing together. We are glad that the Agency is holding public meetings and taking public comment on the Agency’s draft clean vehicle spending plan for the nearly $109m from the Volkswagen settlement.

As you know lung disease is a serious concern, affecting roughly 1 in 10 Illinois residents. These are adults and children that live with asthma, COPD, lung cancer, and other chronic breathing conditions.

We appreciate the analysis IEPA went through in proposing to spend these funds in specific categories, but we hope IEPA will take a broader view of the environmental and health problems that face the state in the final plan. In addition to NOx emissions that were the reason for the settlement, we face toxic and fine particle emissions as well as the growing threat of global warming.

For these reasons we urge the Agency to increase the share of the funds dedicated to transportation electrification efforts.

We are happy that the Agency has dedicated 10% of the funding for 100% Battery powered school buses.

Children, whose lungs are still growing, who process proportionally more air though their lungs than adults, and who are more vulnerable to lung damage will benefit from this dedicated share. IEPA should also ensure that EJ communities are not disadvantaged by requiring school bus contractors serving those areas to meet a higher match requirement than districts that own their own buses.

We also believe the amount of money dedicated to on-road vehicles should be increased significantly and that at least a similar percentage - 10% of the total funding - should be reserved for 100% electric public transit buses as well.

Transit Buses travel in the most densely populated corridors and serve children, seniors, and everyone else who doesn't drive, including people who can't afford cars.
We strongly urge the Agency to also dedicate 15% of the funding, as allowed, for light duty electric vehicle charging infrastructure – just as several other states have done. Electric cars are coming quickly and we need a robust and geographically balanced network so drivers can travel around the state. We need infrastructure for people who will be buying cars < $20,000.

Lastly we understand the needs of the Metra system and the age of its locomotives is a huge problem that should be addressed on multiple fronts. If VW settlement funds are used to bolster Metra’s ability to obtain newer locomotives we strongly urge that new locomotives obtained must meet US EPA’s Tier 4 emission standards.

Likewise if older locomotives are obtained and/or reconstructed and VW settlement funds are used, those locomotives must meet emissions standards that minimally meet US EPA’s Tier 3 emissions standards.

Every day a fossil-fuel vehicle is driven, it runs dirtier and less efficiently because of wear and tear. Electric vehicles don’t have tailpipes and the electricity that powers them will increasingly come from solar and wind power as Illinois’ Future Energy Jobs Act is implemented. For that reason, electric vehicles in Illinois will get even cleaner every year going forward.

Thank you for the time and I hope the Agency will adjust its spending plan to capitalize on the amazing opportunity to accelerate the electrification of transportation in Illinois and reap the long term environmental and health benefits it will bring Illinois residents.

3.3 million EVs worldwide now - EIA estimates today between 125-220m by 2030
2020 Honda Fit 180 miles About $18,000
Illinois Environmental Planning Agency:

The Metropolitan Planning Council would like to thank the Illinois Environmental Protection Agency for the opportunity to review and provide input on the draft Beneficiary Mitigation Plan. Overall, the draft is a good starting point for further discussion. More information is needed to fully understand IEPA’s suggested approach.

The draft BMP plan states three overarching goals: 1) reducing NOx in areas where affected VW vehicles were registered, with a special emphasis on ozone nonattainment and EJ areas; 2) maximize emission reductions; and 3) maximize and leverage funding. The first goal defines the three priority areas that will be eligible to apply for funding. The criteria select only 18 of the 102 counties in Illinois to participate. However, these counties contain 85% of the affected vehicle registrations, 100% of the ozone nonattainment areas, and virtually all environmental justice block groups in the state. The methodology is transparent and appropriate.

The second and third stated goals of the BMP, maximizing emission reductions and maximally leveraging the funding, appear to inform the six selected eligible mitigation actions, the amount of funding dedicated to each, and the cost sharing requirements. MPC offers the following comments on the funding split.

- The plan should be clear that it aims to maximize emissions reduction in the near term. Prioritizing off-road vehicles like tugs and freight switchers will likely remove a larger volume of NOx emissions quickly. However, building out a comprehensive network of EV charging stations could potentially yield the same or greater gains over a longer period of time by encouraging the wider adoption of EVs. MPC shares similar concerns voiced by other organizations that relying on Part C funding alone may not move the needle in a significant way toward building a comprehensive network of vehicle charging stations. MPC believes a larger percent of the award should be dedicated to light duty electric charging infrastructure and other transformative long-term investments.

- The volume of NOx reduction will depend on the mix of projects submitted and selected. Therefore the expected emissions benefits should be expressed as a range, not as an absolute number.

- The BMP should also clearly indicate how emissions benefits were calculated. Currently, the plan only references the tools used, but a technical appendix is needed to understand IEPA’s methodology.

- The BMP implies that the amount of funding allocated across the six selected EMAs was done to maximize the amount of NOx reduction in the aggregate. Notably, off-road vehicles receive the greatest part of the funding because they offer the greatest reduction in NOx on a per-vehicle basis. However, it’s unclear if the current allocation matches the need of communities in the three priority areas. MPC would like to see an analysis of NOx emissions by source in EJ and ozone nonattainment areas. If health outcomes could be better improved by prioritizing on-road vehicles in high-risk communities, the plan should reflect this.
Hello,

Please find attached to this email public comments in regards to the draft Beneficiary Mitigation Plan on behalf of the Village of Libertyville.

Should any questions arise, please feel free to reach out.

Thank you,
Patrick Hastings
Management Analyst
Village of Libertyville
Brad Frost  
Brad.frost@illinois.gov  
Illinois EPA  

RE: Public Comment for the Volkswagen Beneficiary Mitigation Plan

Dear Mr. Frost,

On behalf of the Village of Libertyville, I am submitting comments on the Draft Beneficiary Mitigation Plan (BMP) for the Volkswagen Trust Agreement in regards to what I believed would best suit the Village as well as several other units of government within the Chicagoland region. Local governments are typically the first line of government citizens see and interact with. Having projects funded and completed at the local level not only gives the greatest transparency as to where the settlement money is going, it shows a great “lead by example” to the public when environmentally conscious projects are carried out. Funding local government projects can help to facilitate, inspire and educate projects at the private residential level within all communities.

The Village of Libertyville and its residents have a strong interest in being at the forefront of positive environmental initiatives. There is a Commission of residents that is solely devoted to increasing the sustainable actions of the community. After a recent meeting where possible projects were discussed, a few comments came about that we would like to see incorporated into the final Beneficiary Mitigation Plan.

The first type of project that we would like see funded centers around electric vehicle infrastructure and how the draft plans considers funding it. The trust agreement allows for projects that center solely around the addition or upgrading of all types of charging stations. Yet, IEPA’s draft plan has language that states funding for electric vehicle infrastructure is considered when it is needed within a broader scoped project. With most of the projects under this BMP centered around class four diesel trucks and up, the type of charging infrastructure and the location that the Village would need to install it would not be suitable to the overall community. Allowing new electric infrastructure on Village owned properties for class 1 vehicles and higher, would allow for the public to benefit as well as reduce a hurdle in obtaining electric vehicles within the Village’s passenger vehicle fleet.

The second comment that we would like to submit centers around the purchasing of new trucks and off road equipment. The Village owns various pieces of equipment/vehicles that could potentially be eligible for replacement under this program. When purchasing new, often times many accessories such as computer systems, salt systems, plows and different attachments are needed to get the most use possible. We would like to see all associated costs with these types of purchases be covered under the BMP. Also, purchasing new and destroying the old truck should carry higher weight that just swapping a new engine into an old truck, which the draft plan is calling for. Several other components on old
trucks tend to fail much quicker than the engine. If engine swaps are included, the useful life of that engine may not last as long as the completely new truck.

Thank you for your consideration on these comments. If you would like further clarification or have any questions, please feel free to reach out.

Patrick Hastings
Management Analyst
Yates, Evan

From: Matthew Hanauer
Sent: Friday, April 20, 2018 10:23 AM
To: EPA.VWSettlement
Cc: Angela Tin; John DeRosa
Subject: [External] American Lung Association Illinois Volkswagen BMP Comments
Attachments: ALA BMP Comments Illinois.pdf

Please consider these comments from the American Lung Association. Thank you.

Matthew Hanauer
Clean Air Manager,
Upper Midwest Region
American Lung Association
The American Lung Association has long been involved with efforts to alleviate the burden of mobile source pollution and we have program experience in USEPA’s Diesel Emission Reduction Act or DERA. Within DERA, the American Lung Association has been awarded $19 Million dollars in diesel reduction grants. These projects included partnerships with 107 fleets and 1,407 individual vehicles. Through our grants, our partners have been able to reduce 824,131 tons of quantifiable diesel emissions, with an estimated $1.7 Million in health benefits. In addition, we have been a long time member of the USEPA’s Midwest Clean Diesel Initiative. During the monthly calls and yearly meetings, USEPA has repeatedly requested updates from every Midwest state agency that has a role in the Volkswagen settlement and their efforts in conducting public notices and public meetings.

The drafting process for the Illinois EPA’s (IEPA) Beneficiary Mitigation Plan was not as public a process as it should have been. Other state agencies in charge of this process have held as many as 19 public hearings while Illinois left a public comment period on their already created plan open for less than two months. Organizations that know about the Volkswagen settlement funds and have kept themselves up on the topic barely have time to form their own inputs. Two months is not enough time for the public to be informed much less to make their opinions heard.

A task force of groups in the environmental field should be created to discuss more varied interests throughout the state. Representatives of a cross section of environmental groups can bring new ideas to the table and will make compromises so that new ideas are formed. When the IEPA functions alone, many options may be missed when considering funding opportunities. Creating a task force minimizes that risk.

It is also unfair to many citizen who live outside of the prioritized funding zones that they won’t be considered to receive funding. According to American Lung Association data, approximately 342,000 people impacted by lung cancer or respiratory disease live outside of the prioritized funding areas. That this amount of people won’t even be considered for funding from this settlement is unacceptable.

This process should be more open to all types of alternative fuels. In the current draft, there is a large emphasis on electric vehicles, potentially up to 95% of the funding. Electricity in Illinois is mostly from nuclear and coal plants, which create much of the air pollution our state experiences. Other forms of fueling for mobile sources should not be overlooked or excluded from funding opportunities.

Therefore, the American Lung Association of Illinois requests that the current draft Beneficiary Mitigation Plan should be withdrawn, the public comment period should be extended and a minimum of four public meetings held and their ideas considered, a task force should be created from stakeholders from all eligible vehicle classifications included in the Volkswagen Environmental Mitigation Trust, and the IEPA should provide staff and administrative support for the task force.

The American Lung Association respectfully request that these recommendations be addressed in a written response.
From: Michael J. Reynolds | Director of Public Works
VILLAGE OF BUFFALO GROVE

NOTE: Email, attachments, and responses may be subject to release through the Illinois Freedom of Information Act.

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March 13, 2018

Brad Frost  
Illinois EPA  
Springfield, IL

RE: Comments Relating to Draft BMP VW Settlement

Dear Mr. Frost:

As a long tenured member of the municipal Public Works community, I would like to provide input on two fronts; first on reducing diesel emissions and second on the funding distribution.

With regard to reducing diesel emissions, it is my opinion that the greatest impact in nitrogen oxide reduction short term in most local government fleets would be the removal of non-emission controlled, and exhaust gas recirculation controlled Diesel engine equipped vehicles.

Class six, seven, and eight trucks in municipal service normally are long life units with life spans reaching fifteen plus years. The bulk of their use is in high load situations such as snow removal, hauling, and deicing applications. When operating these vehicles under heavy loads, these older diesels, both non-controlled and EGR controlled, emit their highest levels of emissions.

Giving municipals the ability to replace older diesels with new technology diesel units will provide an instant reduction in emission and give the municipal fleet’s time to plan to move to other energy sources. The movement to gaseous fuels requires great infrastructure redesign. This stepping stone will give time needed to plan, fund, build or retrofit existing fleets and support infrastructure.

Additionally consideration should be given to new diesel technology recently purchased or in the process of being purchased to replace older diesels for incremental reimbursement or full replacement cost based on the vehicles use.

With regard to the distribution of funding itself, I offer the following. Dedicating funding for on-road applications needs to be increased. Increasing funding specifically for municipals will provide the greatest exposure and recognition for the program at the local level. With regard to the off-road allocation, that allocation needs to be reduced and re-direct the funding to the on-road allocation.
My assumption is that the rail sector is a major polluter and given the costs and lifecycles of locomotive engines, greening their fleet has not been an easy task. However, given that most of the equipment included in this class may be private sector assets, consideration should be given to limiting that class and only including eligible public sector assets.

Thank you for your consideration of these comments.

Sincerely,

Michael J. Reynolds
Yates, Evan

From: Samuel E. Smith
Sent: Friday, April 20, 2018 12:30 PM
To: EPA.VWSettlement
Subject: [External] Metra Commuter Rail Comments
Attachments: IEPA Settlement Comments 4-20-2018.pdf

Please see the attached.

Sam Smith
Metra
Government Affairs

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April 20, 2018

The Honorable Alec Messina
Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Dear Director Messina:

Metra applauds the balanced, forward thinking approach the Illinois Environmental Protection Agency (IEPA) proposes for administering the funds allocated to the state from the Volkswagen Environmental Mitigation Trust. IEPA’s goals, priorities and expected benefits for use of the Trust funds can be considerably met by funding Metra projects that reduce diesel emissions.

Metra is one of the largest and most complex commuter rail systems in North America, serving Cook, DuPage, Will, Lake, Kane and McHenry counties in Northeastern Illinois. The agency provides service to and from downtown Chicago with 242 stations, over 11 routes totaling nearly 500 route miles and approximately 1,200 miles of track. Metra operates more than 700 weekday trains, providing about 290,000 passenger trips each weekday.

IEPA identified mobile sources, such as locomotive engines, as representing more than 87 percent of the nitrogen oxide (NOx) emissions in the metropolitan Chicago area. Metra service accounts for 53 percent of the nearly 1,300 daily trains that pass through the Chicago region, the busiest rail hub in the United States. Metra serves the six-county region, of more than 3,700 square miles, identified as having the largest concentration (69 percent) of affected Volkswagen cars in Illinois. Nearly half of the affected Volkswagen cars (32 percent) were located in Cook County where Metra has 161 rail stations. Many of these stations are also located in potential Environmental Justice communities.

Metra identifies modernization of rolling stock as one of its highest capital priorities and crucial to providing safe and reliable service. The existing fleet of 150 locomotives, includes 79 (or 53 percent) that exceed their 30-year useful life benchmark. Replacing or retrofitting these locomotives can cut emissions by 83 percent to 92 percent.

Metra is ready to implement diesel locomotive improvements that significantly reduce emissions and is merely awaiting funding. Committing funds to the retrofitting or replacement of Metra’s diesel locomotives is the most cost effective way for IEPA to achieve the benefit of 1,800 tons of NOx reductions. Metra’s reliable commuter rail service reduces roadway congestion and NOx emissions and provides transportation options in Environmental Justice communities with disproportionate air quality impacts.

Sincerely,

Sam Smith
Government Affairs Officer

Metra is the registered service mark for the Northeast Illinois Regional Commuter Railroad Corporation.
Good afternoon. We at CPS Transportation, along with our vendor partners are very interested in the future possibilities and operation of Electric School buses. Clean air and zero emission vehicles are important to health and safety of CPS children and families. Please accept this note as an indication of our eagerness in participating in this program. Thank you for your time and consideration.

Kevin P. McGuire
Executive Director Transportation
CPS/Student Transportation Services
To whom this may concern,

Please find attached a document supporting Electric School Bus purchases with the EPA VW settlement money.

Cheers

BLG

B. Louise Giles MD FRCPC
Assistant Professor
Co-Director, South Side Pediatric Asthma Center
Director, Pediatric Asthma Program, Comer Children’s Hospital
Medical Director, Pediatric Respiratory Services, Comer Children’s Hospital
Core Faculty & Advisor, Pediatric Residency Program
Program Director, Pediatric Pulmonary Fellowship
Section of Pediatric Pulmonology & Sleep Medicine
The University of Chicago Medicine & Biological Sciences
Comer Children’s Hospital

AT THE FOREFRONT OF KIDS’ MEDICINE
http://www.uchicagokidshospital.org
April 19, 2018

Alec Messina, Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276
EPA.VWSettlement@illinois.gov

Re: IEPA VW Draft Mitigation Plan: Support for Electric School Bus Funding

Dear Director Messina,

I am a Pediatric Pulmonologist (Pediatrician specializing in children’s lung health), practicing in this field for over 15 years.

Asthma rates in Chicago exceed the national average (10%); in parts of Chicago (South & West sides) the rates (20%) far exceed even Chicago’s average. Some communities report asthma symptoms in their children up to 45% (Puerto Rican children, some African American schools in the South Side – Englewood for example)!  

Mapping of asthma rates in Chicago show high rates in communities in the areas of major expressways.

Air pollution is a major contributor to poor health & is responsible for ~7 million deaths worldwide. Particulate matter (PM$_{2.5}$ & PM$_{10}$), / traffic related air pollution (TRAP) produced from diesel exhaust is the deadliest form of air pollution, there is no safe exposure.

Diesel exhaust is one of the major pollutants in exhaust from trucks and buses (including school buses). PM$_{2.5}$/TRAP cause inflammation & injury in the lungs. The normal cleansing mechanism in the lungs (mucociliary clearance) is impaired. PM$_{2.5}$/TRAP damages the cells responsible for protecting the lungs (alveolar macrophages).

PM$_{2.5}$/TRAP reduces lung function in children, this persists into adult years. There is an association between PM$_{2.5}$/TRAP exposure and the development of asthma. Asthma is more prevalent in areas with high PM$_{2.5}$/TRAP (including areas in Chicago). Higher levels of PM$_{2.5}$/TRAP are associated with asthma exacerbations (sick with symptoms) and emergency room visits. This leads to lost days of school (child) and employment (parent/caregivers).

Data suggests that the abnormal lung function in children who are exposed to high PM$_{2.5}$/TRAP may be reversed if the exposure is reduced/removed. More data are necessary but Pediatric Pulmonologists (like myself) do advocate a reduction in exposure to PM$_{2.5}$/TRAP.

Children & families with asthma are taught how to monitor air quality & reduce outdoor activity when air quality is poor.
Children are exposed to diesel exhaust if they ride a school bus to/from school. They are also exposed to diesel exhaust at school especially if buses are allowed to idle. This exposure can lead to asthma symptoms and lost school days. Reducing this exposure can help children with asthma breathe easier.

For all of the above reasons I strongly support the IEPA directing 10% of Illinois' VW Mitigation Trust Fund for electric school buses. Transporting children on zero emission school buses will reduce their exposure to harmful diesel, PM2.5/TRAP, and contribute to better health outcomes.

B. Louise Giles MD FRCPCH
Assistant Professor, Section of Pediatric Pulmonology
Director Pediatric Asthma Program, Comer Children's Hospital
Medical Director Respiratory Care Services, Comer Children's Hospital
Co-Director: South Side Pediatric Asthma Center
Core Faculty & Advisor, Pediatric Residency Program
Program Director, Pediatric Pulmonary Fellowship
The University of Chicago Medicine & Biological Sciences
Comer Children's Hospital

AT THE FOREFRONT OF KIDS' MEDICINE.  http://www.uchicagokidshospital.org
Please see attached comments on the draft settlement plan. Thank you very much for the opportunity to comment.

Robyn Flakne | Village of Glenview Natural Resources Manager | Public Works Department
April 20, 2018

With regards to the draft Illinois VW Beneficiary Mitigation Plan, the Village of Glenview offers the following comments:

1. The settlement offers an opportunity to reduce greenhouse gases and several other pollutants, not just NOx. These goals can be combined to strengthen the goals of the program.
2. Eligible vehicles should be defined by performance rather than vehicle type.
3. More should be allocated towards on-road projects, as these are not already funded by other programs and have direct impact on vulnerable populations. A larger allocation towards public sector vehicles would allow applicants to optimize clean fuel choice.
4. Investing in municipal fleets would provide a positive message and example to residents, as well as directly improving air quality. While supporting greener fleets is a common goal, funding to implement the goal is scarce. This program is an opportunity to do so, and allocation towards this end should be increased.

Sincerely,

Robyn Flakne
Natural Resources Manager
Yates, Evan

From: Kim Leftwich
Sent: Friday, April 20, 2018 2:18 PM
To: EPA.VWSettlement
Cc: ‘Dale Righter'; Foiles, Scott
Subject: [External] Comments - Illinois beneficiary Mitigation Plan
Attachments: Illinois Beneficiary Mitigation Plan (draft) - ILEPA.docx

I have attached a comments submittal per instructions in the recent ILEPA email for the VW settlement fund. My contact information is listed below. Thank you for your consideration.

Kim B. Leftwich
President/CEO
Coles-Moultrie Electric Cooperative

[Image of Coles-Moultrie Electric Cooperative logo]
Illinois Environmental Protection Agency

Attn: Mr. Brad Frost

Re: Illinois Beneficiary Mitigation Plan (Draft)

I represent Coles-Moultrie Electric Cooperative (CMEC), an electric distribution cooperative located in east central Illinois and headquartered in Mattoon. Like many, we have an increasing interest is contributing to adoption of more fuel efficient vehicles, in particular, electric vehicles (EV’s). Although we can fully appreciate the direction that the ILEPA has set by developing the draft Beneficiary Mitigation Plan, we would respectfully ask that the Agency consider adding an element to the plan that recognizes the pivotal role rural areas play in the economy of this state, note that rural Illinois has been frequently been overlooked for economic development opportunities, and that rural areas can contribute to the acceptance and growth of electric driven vehicles.

CMEC is one of five founding members of the Center for American Rural Energy (CARE). The consortium is comprised of three academic institutions: Eastern Illinois University, University of Illinois, and Lake Land College; Coles Together, our regional economic development organization; and CMEC with sponsorship from the National Rural Electric Cooperative Association (NRECA). CARE is uniquely situated to perform test and evaluation of deployment of electric vehicles in fleets servicing rural communities and areas. In fact, CARE has a multi-phase Rural Electric Vehicle Demonstration Project in development and has already drawn interest from national suppliers of vehicles and charging infrastructure.

Our project has phases which address addition of EV sedans to a local hospital fleet; addition of light duty vans and pickup trucks to an electric material supplier; development of a charging infrastructure roll-out model; electric charging rate design; and technical skills curriculum development for EV automotive technicians. At the close of the project, all results are to be published and offered nationally through the NRECA research arm.

If I may provide additional information, please feel free to contact me. We appreciate your consideration.

Kim B. Leftwich, President & CEO, Coles-Moultrie Electric Cooperative
Illinois EPA,
Thank you for allowing us to provide comments on the IEPA VW Beneficiary Mitigation Plan. Ameren Illinois' comments are attached.

Please call if you have questions.

Thank you,

Craig Nelson
Senior Vice President
Ameren Illinois Company
April 20, 2018

Ameren Illinois (AIC or the Company) appreciates the opportunity to provide comments on the Illinois Environmental Protection Agency’s (IEPA or Agency) draft Beneficiary Mitigation Plan. Overall, AIC is supportive of the IEPA’s approach and rationale for its proposed uses of the Mitigation Trust Funds. In particular, the Company appreciates:

- The Agency's proposed approach of evaluating the expenditure of trust monies against the quantity of nitrous oxide (NOx) removed, and its prioritization of those activities that produce the greatest amount of NOx reduction per dollar of trust monies expended;
- The proposed use of State trust monies in complement to the expenditure of monies by VW as part of their Electrify America program, especially in light of Electrify America’s commitment to develop charging corridors along several Illinois interstates and to install fast charging stations at workplaces and multi-family dwellings within the Chicago area; and
- The Agency's recognition of the need to support downstate NOx reduction efforts, both within the SW Illinois region as well as those communities with significant concentrations of VW vehicle owners.

Ameren Illinois does have recommendations for improvements to the draft Plan. These include:

- Additional weighting should be applied to electrification projects whose applicants leverage their options under Electric Choice programs, and commit to using renewably-fueled electric supply sources if they replace fossil-fueled vehicles with electric vehicles. (Please note that Ameren Illinois does not own any electric generation facilities, renewably fueled or otherwise, nor does it profit from electric supply services provided to its customers or any other electric users within or outside Illinois.)
- While the Agency appropriately focuses a substantial amount of attention on non attainment areas within Illinois and communities with significant concentrations of VW vehicle ownership, AIC urges the Agency to equally regard projects that remove comparable amounts of NOx, regardless of the geographic location within the State in which it's created.
  - The Company urges the Agency to fund qualifying projects from downstate transit agencies, school districts, private companies and other entities who may not be located in geographic areas highlighted within the draft Plan but who nonetheless may be able to provide significant NOx reductions per dollar of Trust monies spent.
- The plan needs to reflect an understanding that adoption of EV or alternate fueled vehicles in non-attainment areas will be constrained if the prospective owners of those vehicles are uncomfortable operating them outside of their immediate environs.
Stated another way, range anxiety will restrict the adoption of EV’s and other alternate fueled vehicles within attainment areas if they can’t be driven to downstate colleges, tourist destinations, cultural events and professional sporting events in immediately adjacent states.

At this time, AIC doesn't envision itself as an applicant for any monies from the trust, nor do we envision a role in owning or operating fueling or charging stations. Instead, we view ourselves as facilitators and support for our communities and our customers through a variety of mechanisms. This support includes:

- The Company recently secured approval from the Illinois Commerce Commission for changes that effectively reduce the amount of any upfront monies paid by customers to enhance or extend electric and/or natural gas service lines.
  - These changes should eliminate or greatly reduce the upfront costs for any customers switching from diesel fueled engines to engines fueled with either electricity or natural gas.
- Beyond the line extension provisions mentioned above, the Company’s existing tariff structure also makes it unlikely that customers will incur costs for any upgrades to service transformers or gas delivery facilities.
  - To the extent that the Company’s tariffs, policies or practices present obstacles to the repowering envisioned in the Mitigation Trust Settlement and the Agency’s Beneficiary Mitigation Plan, Ameren Illinois commits to pursuing the changes necessary to removing those obstacles.
- AIC is already working to increase awareness of the potential opportunities available through the Agency’s implementation of the Beneficiary Mitigation Plan among its retail and wholesale customers.
- The Company commits to provide the Agency with any information that it’s able to share on electric and natural gas usage to assist the Agency in evaluating the effectiveness of the Implementation of the mitigation plan.

Again, Ameren Illinois appreciates the opportunity to provide its perspective on the IEPA’s proposed Beneficiary Mitigation Plan, and ask that you contact me if you have any questions about these recommendations.

Thank You,

Craig D. Nelson
SVP Regulatory Affairs & Financial Services
Dear Sir or Madam:

Please find attached the Comments of the Natural Resources Defense Council, regarding the Illinois EPA's Draft Beneficiary Mitigation Plan.

As requested by the Illinois EPA, our comments provide guidance and input on the state's current draft plan.

We appreciate the opportunity to comment on this important matter. Please confirm receipt of this message and its attachment.

Best,

ALOYSIUS MAKALINAO
Schneider Fellow

NATURAL RESOURCES DEFENSE COUNCIL

NRDC.ORG
Comments on the Illinois Volkswagen Settlement Draft Beneficiary Mitigation Plan

Introduction

The Natural Resources Defense Council (NRDC) thanks the Illinois Environmental Protection Agency (IEPA) for the opportunity to comment on the Illinois Draft Beneficiary Mitigation Plan (BMP), released for comment on February 27. NRDC provides the following recommendations on the use of the $108.7 million in funds that the state of Illinois received from the environmental mitigation trust (EMT) established by the Volkswagen (VW) consent decree. In brief, the EMT presents a significant opportunity for Illinois to reduce harmful nitrogen oxide (NOx) emissions and particulate matter (PM), especially in environmental justice communities that bear disproportionate pollution burdens, reduce the state’s dependence on petroleum-based fuels, and modernize Illinois’s transportation sector. The VW EMT
should be allocated to support a critical transformation of the transportation sector from petroleum-based fuels, to clean electricity in Illinois. This transformation should meaningfully reduce transportation emissions, particularly for communities that are disproportionately burdened by pollution. We recommend that the IEPA incorporate the following in its next revision to the BMP:

1) Invest the full 15 percent on light-duty zero emission supply equipment
2) Create a specific allocation for overburdened environmental justice communities
3) Establish a formal, more iterative stakeholder process
4) Revise the current online VW survey

Comments on Draft Beneficiary Mitigation Plan

As a member of the Charge Up Midwest coalition, NRDC has been active in developing policies at the intersection of transportation electrification and utility regulation in Michigan, Minnesota, Missouri, and Ohio. We are a signatory to a settlement with American Electric Power Ohio that would invest $10 million to deploy almost 400 charging stations across the state. NRDC is involved within the Missouri EV Collaborative, a multi-stakeholder electrification group, that has provided comments to the Missouri Department of Natural Resources, recommending the creation of a direct current fast charging (DCFC) network across the state. We have also advised the Michigan Public Service Commission and the Minnesota Public Utilities Commission in their efforts to advance transportation electrification.

While these comments focus on deficiencies in the draft plan, we commend the IEPA on their $10 million carve out for electric school buses. In comparison to other Midwestern states, Illinois’ beneficiary mitigation plan provides the largest dedicated funding allocation for zero emission vehicles serving the youth population.¹ School buses provide an excellent use-case for medium-duty battery

electric vehicles: low speed, and low torque scenarios show significant emission reductions compared to
diesel.\textsuperscript{2} Zero emission school buses will ensure that fewer children will suffer from asthma attacks and
respiratory diseases caused by exposure to harmful diesel air pollution. These reductions will not only
help protect our children, but also ensure fewer sick days in school districts across the state and fewer
days of missed work for parents.\textsuperscript{3} Currently, electric school bus models are offered by four companies—
Blue Bird, etion, Trans Tech, and Starquest.\textsuperscript{4} However, Illinois should further its commitment to zero
emission vehicles beyond the school bus segment, as recommended below.

1) IEPA should dedicate fifteen percent (or $16.2 million), the maximum amount allowed,
towards light-duty plug-in electric vehicle charging stations, because EVs are the most
promising way to reduce NO\textsubscript{x} emissions from the single largest mobile source.

An investment in light-duty charging infrastructure with EMT funds will help narrow the existing
EV infrastructure gap and will put Illinois on the path towards long-term emissions reductions, as light-
duty vehicles are the largest single source of mobile source NO\textsubscript{x} emissions in the state.\textsuperscript{5} When charging
on the electrical grid in Illinois, EVs will have 40 percent fewer lifecycle NO\textsubscript{x} emissions than the typical
gasoline vehicle within two years.\textsuperscript{6} Thus, near-term investments in EV infrastructure will deliver
immediate benefits to Illinois and deliver future emissions savings.

Based on an analysis by the National Association of State Energy Officials and the National
Association of Clean Air Agencies, the plurality of NO\textsubscript{x} emissions in Illinois comes from on-road light-duty
vehicles (28 percent, 84,000 tons) followed by on-road heavy-duty vehicles (27 percent, 79,000 tons),
while locomotives contribute just under 15 percent of total mobile NO\textsubscript{x} emissions (See Figure 1).\textsuperscript{7} These

\begin{itemize}
  \item \textsuperscript{2} https://www.sciencedirect.com/science/article/pii/S0360544215016837
  \item \textsuperscript{3} https://www.atsjournals.org/doi/abs/10.1164/rccm.201410-1924OC#VrgOrTyrLeR
  \item \textsuperscript{4} https://www.veic.org/Media/success-stories/types-of-electric-school-buses.pdf
  \item \textsuperscript{5} http://www.vwcleaninghouse.org
  \item \textsuperscript{6} Analysis by Atlas Public Policy using Argonne National Laboratory's GREET model v1.3.0.13239
  \item \textsuperscript{7} https://vwcleaninghouse.org/
\end{itemize}
numbers demonstrate the need to prioritize emissions coming from on-road sources and the greater potential to see improved air quality by investing charging infrastructure for light-duty vehicles. Light-duty EVs reduce NOx emissions by 50-90 percent per gasoline vehicle replaced.  

![Mobile Source Tons of NOx Emissions by Sector](chart)

**Figure 1: Illinois Mobile Emissions**

Illinois needs more light duty vehicle charging stations. An analysis performed by MJ Bradley and Associates estimates there are about 12,300 EVs in Illinois today. There are only 391 public charging stations with 847 charging outlets in the state of Illinois, and the vast majority of those are “Level 2” stations only suitable for long-dwell time locations where cars are parked for many hours. Further, fast charging barely exists in Illinois. Only two public DCFC charging locations in Illinois have more than one charging port of the same connector (see Figure 2).

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9 [https://mjbradley.com/sites/default/files/IL%20PEV%20CB%20Analysis%20FINAL%202016sep17.pdf](https://mjbradley.com/sites/default/files/IL%20PEV%20CB%20Analysis%20FINAL%202016sep17.pdf)

10 [https://www.afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC](https://www.afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC), April 18, 2018
Second-generation electric vehicles such as the Chevrolet Bolt EV, which offer longer ranges at affordable price points are now available, but the lack of robust public charging infrastructure could inhibit mass adoption. Without more charging stations, some Illinois citizens will be reluctant to purchase EVs. Studies have shown that the availability of public EV charging infrastructure is a key driver of EV adoption in metropolitan regions. Prospective EV owners will be hesitant to purchase EVs unless they are certain that there is an adequate public charging network available, and private companies and utilities will not invest in EV charging infrastructure unless they are certain there is an adequate market to make a reasonable profit. Reliable access to fast charging will need to exist for long-range EVs to compete with gasoline vehicles, and today’s infrastructure is not up to the challenge. A $16.2 million investment in light-duty charging infrastructure could play a key role in jumpstarting the transportation electrification market. Over 70 percent of states with beneficiary mitigation plans have

already made this commitment by designating the full 15 percent towards EV infrastructure, including Michigan, Minnesota, Missouri, and Ohio.

While Electrify America has targeted the Chicago metro area to deploy approximately $13 million worth of charging stations, it will only provide a small share of the infrastructure necessary to increase EV adoption in the region and will not provide infrastructure in much of the rest of the state. More money is needed from the EMT to help narrow the gap of EV charging infrastructure, especially in areas that will not be served by Electrify America’s nascent deployment. To this point, Electrify America has only identified seven DCFC charging hubs and approximately twenty Level 2 charging hubs in multi-unit dwellings and workplaces across Chicago. Although Electrify America hopes to eventually install an additional 100-200 charging outlets within the greater Chicago area, the state of Illinois will still need at least 23,000 charging outlets by 2030, over 20 times the amount the state currently has in addition to the tentative Electrify America commitment. Even with investments from Electrify America, there is still a long way to go to satisfy future charging needs.

Electrify America also has no public obligation to serve disadvantaged communities. Of the seven proposed charging hubs, five have been designated within suburbs outside of Chicago. In addition, Electrify America will likely target the most profitable locations first, potentially shutting out the neighborhoods that are most affected by diesel-related pollution from considering EVs. Although Electrify America has pledged to install four multi-unit dwelling charging hubs, it is not nearly enough for the Chicagoan population since 60 percent of Chicagoans live in multi-unit dwellings. Within this planning framework, most residents are not accounted for, particularly low-income residents who in many cases live in these multi-unit dwellings. Electrify America’s network, which is focused around the Chicago metro area will also leave large swaths of the state underserved. We recommend the IEPA

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6 [https://www.nrel.gov/docs/fy17osti/69031.pdf](https://www.nrel.gov/docs/fy17osti/69031.pdf)
dedicate the full 15 percent towards EV charging infrastructure to jumpstart the incoming EV market. Funds should be used to create a practical charging corridor throughout the state to address the “range anxiety,” so that no driver is afraid of running out of fuel no matter where they are in the state. To stretch Environmental Mitigation Trust dollars further, we strongly recommend IEPA seek to partner with the state’s electric utilities, which are well situated to provide supporting electrical infrastructure, allowing IEPA to create a more robust network as a result.

This is in line with what other states are doing. For example, the Missouri EV collaborative released a joint proposal for VW funds to create a minimum practical charging network across the entire state with an estimated cost of $6.8-14.4 million with the cost split among utilities, nearby communities, and VW funds (See Figure 3). And in Michigan, the Charge Up Midwest coalition also proposed a similar plan at the Public Service Commission’s EV Technical Conference. By collaborating with these nearby states that have already shown interest in a network, Illinois could partner with its electric utilities and private companies to help create a Midwestern EV corridor to allow EV drivers to travel from state to state without the fear of running out of fuel.
2) IEPA should clarify how it will prioritize underserved areas and should consider criteria to target areas that are cumulatively burdened by poor socio-economic conditions along with regional and local air pollution and other environmental factors.

IEPA should provide greater specificity as to how the plan will reduce air pollution in environmental justice communities and prioritize addressing pollution in communities facing the greatest cumulative burdens beyond what is currently proposed. IEPA has designated three large priority areas within the state, but more granularity is needed to ensure that funds will drive change in the localities within these areas that are most burdened by the cumulative impacts of pollution. The set of criteria IEPA used to identify priority areas do not fully encapsulate the environmental justice problems associated with diesel vehicles that are compounded by poor socio-economic status and other vulnerabilities. Within the Chicagoland area, which is designated as nonattainment for ozone, the areas with the most VW registrations do not correlate with such environmental justice areas. Thus, even though reductions in NOx levels in one part of the ozone nonattainment area can positively affect ozone
levels in nearby burdened areas, only targeting such reductions will not effectively address local pollution burdens from diesel vehicles that fall disproportionately on low-income communities and communities of color and contribute to the high cumulative burdens faced by these communities.

IEPA should make specific investments in overburdened communities that suffer from high levels of NO\textsubscript{x}, PM, and other harmful diesel-related emissions as well as other sources of pollution, and that are most vulnerable to the negative impacts of pollution, to achieve the greatest overall benefit to environmental justice communities. Such an approach will not only reduce ozone regionally, but also benefit vulnerable communities saddled with disproportionate burdens linked to diesel vehicles.

NRDC specifically recommends that the IEPA consider delegating funds to specific communities based on cumulative impacts analysis consistent with the state’s definition of an environmental justice community. Cumulative impacts analysis does not focus on one or a handful of environmental exposure metrics in isolation, but instead takes a more comprehensive look at pollution and community vulnerability factors to assess the areas most burdened by environmental pollution. For example, Figure 4 is a map generated by using US EPA’s EJSCREEN tool that considers only levels of diesel PM, as block group percentile rankings relative to other block groups in Illinois. With this limited picture, the Downtown Loop area and major highways are highlighted as “overburdened communities.” Yet, this simplification does not encapsulate the populations that are most greatly impacted by diesel pollution from a cumulative view. The Downtown Loop area is a primarily commercial sector that amasses large amounts of air pollution due to daily commuting. Low-income residential communities of color outside of downtown and along highway corridors, in contrast, bear a significantly larger environmental and socio-demographic burden, of which diesel air pollution is a significant part.

\footnote{A similar picture would result from mapping solely vehicle-related NO\textsubscript{x} emissions in the Greater Chicago area. (Note that EJSCREEN does not include a NO\textsubscript{x}-ozone indicator; its contribution is only captured in the general ozone indicator, the modeling of which is dominated by regional patterns.)}
By incorporating a wider set of vulnerability factors, high priority areas within the Chicago region shift. Figure 5 below, also generated using the EJSCREEN tool, depicts an indicator called the EJ index for diesel PM. This index, created by the US EPA, combines information on diesel PM levels with rates of poverty and percentage of minority population, based on the understanding that socio-demographic factors can combine with environmental exposures to produce heightened vulnerability. Thus, in the more comprehensive picture shown in Figure 5, areas cumulatively burdened by diesel PM and population vulnerability (as captured by minority and poverty status) lie outside of downtown, in West Chicago, along the I-55 corridor, and in the Calumet region in particular along highway routes.
Figure 5: Diesel PM Environmental Justice Index in Chicago, US EPA EJSCREEN 2017

The differences between the two preceding figures illustrate the importance of considering socio-demographic factors that can heighten vulnerability, along with environmental exposures. US EPA’s EJSCREEN tool can be a starting point for such a cumulative impacts approach. To best leverage the tool to identify priority areas for present purposes, we recommend considering not only US EPA’s EJ index for diesel PM, but also the other ten EJ indices provided by the tool. These other indices cover a range of environmental exposures that also contribute to the cumulative pollution burden (such as traffic proximity and hazardous facilities). Similarly, although the formula for deriving EJ indices in EJSCREEN only incorporates poverty and minority status as population information, additional socio-
demographic indicators (such as educational attainment, population under age five, and population over age 65) are available through the EJSCREEN tool and should be considered as well. Further, environmental and population information available only in Illinois (and therefore excluded from US EPA’s EJSCREEN) should also be taken into account. In this regard, we understand that the IEPA is currently exploring the development of a state-level environmental justice screening tool. We support that endeavor and the new tool’s use to the extent possible here.

In addition to taking a cumulative impacts perspective to identify target areas, IEPA should prioritize vehicle types that most adversely affect local conditions to best address the contribution of air pollution to cumulative impacts in these areas. Within the areas that stand out from a cumulative burdens perspective, we recommend investment in, for example, cleaning up the medium- and heavy-duty trucks that pass through these communities on a daily basis and can cause significant diesel particulate matter hot spots. Light commercial urban delivery vans, medium-duty regional delivery trucks, and refuse trucks are all promising targets for electrification within these overburdened areas. The low speed of these vehicles eases battery requirements in addition to their stop and go routes allows for greater fuel efficiency through regenerative braking, further improving the technology’s effectiveness in reducing harmful pollution.

3) IEPA should establish a formal stakeholder process and seek continual improvement through cycles of funding and feedback.

Other states in the Midwest have established forums and begun formal discussions on how to allocate their respective EMT funds with some states such as Minnesota taking over a year to gather

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input before drafting its BMP.\textsuperscript{16} To provide transparency and opportunity for all stakeholders to comment, Illinois should initiate a similar process.

The Missouri Department of Natural Resources (MoDNR) created a VW Trust Advisory Committee that held meetings to gather input prior to writing the draft plan. The committee was voluntary and open to anyone with an interest. In addition, MoDNR set up two different surveys to gather feedback for their recent beneficiary mitigation plan. The first asked for feedback on the overall goals of the plan, much like the IEPA is doing, and the second requested comments on implementation guidelines. Specifically, the MoDNR asked for comments on selection process, target areas, contingencies, and timing of awards and fund disbursement.\textsuperscript{17} The Minnesota Pollution Control Agency (MPCA) divided VW funds into three different phases between 2018-2027 with specific allocations per phase.\textsuperscript{18} The plan itself only focused on funding for Phase 1 (2018-2019) so that the MPCA can gather public input and overall learnings to inform the next round of funding. Based on this structure, the Minnesota VW plan has built in transparency and frequent project evaluation to modify allocations to best suit the state. The Ohio Environmental Protection Agency also created a provision within its beneficiary mitigation plan, which actively seeks revision. In the case that a major revision is a necessary at any point in the ten-year period, a public notice will be sent to various stakeholders, and the agency will enact a 30-day public comment period.

IEPA should set up a formal process for parties to share input and ensure that the final plan reflects the perspectives of Illinois stakeholders, particularly those representing communities most affected by long-term transportation pollution. In addition, a phased funding structure should be more

\textsuperscript{16} https://www.pca.state.mn.us/sites/default/files/aq-mvp2-32c.pdf
\textsuperscript{17} https://www.surveymonkey.com/r/implementationguidelines
\textsuperscript{18} https://www.pca.state.mn.us/sites/default/files/aq-mvp2-32a.pdf
explicitly established to ensure that the plan goes through multiple iterative periods that guarantee the most optimal use of the VW funds.

4) **IEPA should revised the current VW survey or create another survey to elicit more robust feedback.**

The current survey fails to provide stakeholder an adequate forum to elicit public feedback and should be modified or overhauled to better reflect a more diverse set of opinions. Although the survey asks 22 questions, almost half of them are only available to participants that plan to propose a project. With such a setup, the survey will greatly favor those proposing projects over all other participants, especially those within low-income communities.

Several of the questions often pigeonhole the possible answers a participant can give and do not encompass the complexity involved with these issues. Four questions require a participant to choose only one “top priority.” One question asks the participant to choose their top impacted community, but this question places the participant in a position to ultimately prioritize certain communities over others. In addition, some of the selections for this question are intertwined with each other, but there is no option to select more than one. Rather than ask the participant to pick only one top choice, a checklist function could be implemented to allow a participant the option to select more than one option per question. An “other” category should be included in each of these questions in the case that the participant would like to offer another alternative.

After the release of its VW plan, the MoDNR created two surveys to elicit feedback. Based off these surveys, we suggest that the IEPA consider including a final question that asks the participant for free-response comments and final thoughts. We also recommend that the IEPA include more clarity in its questions with specific regard to ones that ask about category funding allocations and geographical

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preferences. One of the MoDNR surveys asks participants to write down their ideal allocation spread amongst the various vehicle types and geographical zones across the state. The IEPA VW survey should include more freedom to offer general input and reasoning for decisions, as well as more clarity on the existing questions and how they specifically relate to funding allocations and geographical preference.

Conclusion

Illinois's portion of the overall EMT presents the state with a significant opportunity to reduce its transportation sector emissions now and for decades to come. The state should seek to make an impact that can be long lasting and transformative. By funding widespread electrification and charging infrastructure and specifically targeting underserved areas through a set carve out of VW funds, the IEPA has the potential to initiate changes that make the most impact for the state.

To ensure the robust participation of all interested parties and those that expect to submit funding proposals, a more collaborative and iterative process of developing a final plan should be implemented in the long-term. We look forward to working with the IEPA and all associated stakeholders in the future.

Respectfully submitted,

Aloysius Makalinao  
Schneider Fellow

Elizabeth Toba Pearlman  
Staff Attorney/Clean Energy Advocate, Midwest Region
Please see attached comments. Thank you for considering these.

Regards,

Tom Mack
President/CTO
VeRail Technologies, Inc.
www.VeRail.com

14560 W 92nd Street, Suite 100
Overland Park, Kansas 66210

(913) 591-1111 Office
(913) 591-1117 Fax
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(913) 591-1112 Corporate Phone
(913) 591-1113 Corporate Fax
VeRail Technologies appreciates the opportunity to comment on the State of Illinois’ Draft Beneficiary Mitigation Plan for VW Settlement Funds. VeRail is a technology company, headquartered in Cincinnati, OH, that is developing near-zero-emission dedicated natural gas (CNG or LNG), straight battery, and natural gas/battery hybrid switcher locomotives (see addendum for additional information).

VeRail recognizes the importance of soliciting information and ideas on how the Settlement Funds should be spent. It is imperative that science-based information is the primary method for determining outcomes to assure that the Funds are spent prudently and provide the desired health-based results. VeRail agrees with the State’s determination to use the Funds to support projects that maximize NOx emission reduction, especially in the non-attainment areas that bear a disproportionate share of the air pollution burden, including environmental justice areas. Such areas frequently are found along railroad right of ways that border underserved communities.

VeRail wishes to provide information and ideas on initiatives in Illinois that can provide the most cost-effective way to maximize NOx emission reductions. The Draft Beneficiary Mitigation Plan correctly identifies old freight switcher locomotives and passenger locomotives and their highly-polluting engines as a priority for replacement with the State’s VW funds. We agree that the inclusion of switcher and passenger locomotive engine replacements in the Plan represent one of the most effective strategies available.

VeRail urges IEPA to become better acquainted with the newest and cleanest locomotive engine technologies and to closely examine railroads operating within the State of Illinois that can cost effectively utilize these technologies in their existing locomotive operations. At the same time, IEPA needs to resist the temptation to deploy the easier-but-less-effective strategy of upgrading old locomotives with “much cleaner diesel engines.” While an upgrade of an old, dirty locomotive to Tier 4 off-road diesel engines provides significant NOx reductions, it does not represent the best available emission reduction strategy for locomotives. A much cleaner new “Tier 5” locomotive-engine technology, manufactured by VeRail Technologies, will soon be pilot tested in California and demonstrate a nearly ten-fold reduction in NOx emissions over the current off-road Tier 4 diesel locomotive engines.
IEPA should remember that the Tier 4 off-road standard still results in NOx emissions as high as 1.3 g/bhp-hr – which is higher than the 2007 Tier 4 interim on-road standard, and 6.5 times higher than the 2010 Tier 4 Final on-road diesel standard! While an upgrade of an old diesel locomotive to the Tier 4 standard may offer significant improvement over the status quo, NOx emission levels under this strategy will still be elevated and run counter to the goal of both protecting the health and achieving environmental equality for Illinois residents. Near-term emissions benefits can be achieved through this cleaner diesel strategy but they will be achieved at the cost of creating a barrier to longer-term emission improvements; investing in a Tier 4 locomotive strategy perpetuates this major source of high-NOx emissions for the lifetime of the engine upgrade – an engine that can remain in service for 30 years or longer.

Further exacerbating future locomotive emissions is the fact that many railyards are located in underserved communities. Since switcher locomotives will operate within the small confines of these yards for most of their operational lives, the emissions from locomotives are intensified compared to trucks that spend only a fraction of their time at a terminal. So not only can the emissions from a Tier 4 diesel locomotive be 10 times or more greater than the emissions from a Tier 4 truck, the effect to the communities surrounding the railyards can be the equivalent of hundreds of trucks operating in and out of the yard. Thus the cleanest available technology should be considered in order to minimize the detrimental effects on disadvantaged neighboring communities.

With investigation, IEPA will find that while the California natural gas and natural gas/battery hybrid engine projects referenced above are not yet commercially available, the cleaner technology is likely to become available within the timeframe of the proposed launch and duration of the Illinois Beneficiary Mitigation Plan. The Tier 5 compliant locomotive engines being developed by VeRail are already being dynamometer tested for EPA certification in the summer of 2018. The California straight battery and dedicated natural gas pilot projects (which add Zero-Emission Track Miles operation) are scheduled for completion in 2019. Its large potential impact in the near term is why this VeRail technology is receiving such considerable attention from other states and why the technology strategy is likely to be included in a number of soon-to-be-released VW state settlement plans.

VeRail supports the State of Illinois’ plan to request up to 65 percent of the Volkswagen Trust funds allocated for off-road or non-road projects. As the draft plan states, “Off-road or non-road projects, especially those involving locomotives, often result in the greatest amount of emission reductions and can be the most cost-effective projects.”

Consequently, VeRail strongly urges IEPA to include a sizeable freight switcher and passenger locomotive engine replacement program in the State’s Beneficiary Mitigation Plan. We recommend that IEPA closely monitor the technological improvements and commercialization inroads of these technologies and investigate where in the State these locomotives may be deployed.
With the State’s heavy industrial and agricultural base and sizeable population of short line railroads, there will be no shortage of freight switcher locomotives available to upgrade. According to one knowledgeable source, there are more than 250 freight switcher locomotives in Chicagoland alone. Some potential railroad operators include Chicago South Shore, Chicago Rail Link, Belt Railway of Chicago, Canadian Pacific, CSX Transportation, Norfolk Southern, Union Pacific, Canadian National, BNSF, and Watco. In addition to its passenger locomotives, Metra also operates eight switcher locomotives. In the East St. Louis non-attainment area, companies such as ADM, US Steel, Foster Townsend Rail Logistics, and the Terminal Railroad Association of St. Louis (with a huge hump yard in Venice, IL) operate upgrade-eligible freight switchers.

The inclusion of a freight switcher locomotive engine replacement plan along with the Metra passenger locomotive/DERA option upgrade will assure the greatest NOx reduction strategy of any single mobile source within the State.

VeRail urges IEPA to keep its technology deployment options flexible so it can utilize the cleanest technology options in each phase of its awards. Switcher and passenger locomotives that are updated today are likely to remain in service until 2050 and beyond. With the size of investment required and the length of a locomotives’ serviceable life, it is important to make the most cost-effective choices. Over the lifetime of these locomotives, trucks will no doubt continue to become cleaner, as low-NOx (0.02 g/bhp-hr) natural gas trucks, and zero-emission battery powered trucks replace today’s clean trucks. Thus the emissions gap between trucks and Tier 4 diesel locomotives will become even more egregious than it is today. Now is the time to narrow this gap for the future benefit of Illinois’ population, especially those who live near railyards.

VeRail also encourages IEPA to utilize one of the nation’s greatest scientific resources available to evaluate environmental impact of transportation strategies, Illinois’ own Argonne National Laboratory (ANL), located in Lemont, Illinois, to assess the strategies chosen to be included in the Illinois Beneficiary Mitigation Plan. The mitigation plan guidelines allow such administrative expenditures and IEPA should devote a portion of these funds to engage ANL for this purpose.

VeRail welcomes the opportunity to answer any questions from the IEPA staff about our innovative technology. We encourage the staff to tour a site where this technology has been deployed and to call the environmental program managers in other states who are responsible for the project management and for monitoring the emission results.

**Tom Mack, President/CTO**

1776 Mentor Avenue, Suite 350, Cincinnati, Ohio 45212-3583

www.verail.com
Addendum

Please refer to the attached PowerPoint slides for the comparative emissions analysis of a Tier 4 diesel switcher locomotive vs a Tier 5 VeRail CNG switcher locomotive as will be demonstrated in Southern California. A description of the program is described in this link: http://www.lbbizjournal.com/single-post/2017/01/30/Rail-At-Near-Zero-Emissions

VeRail Technology Status: Engines at dyno facility and ready for final calibration and emissions testing to meet proposed EPA Tier 5 locomotive emissions

Contacts for VeRail natural gas locomotive program at Ports of Los Angeles and Long Beach:

a. Port of Long Beach: Jacqueline Moore, Environmental Planning Division, jacqueline.moore@polb.com, (562) 283-7119

b. Port of Los Angeles: Jacob Goldberg, jgoldberg@portla.org, (310) 732-2675

c. South Coast Air Quality Management District (SCAQMD): Joseph Lopat, Air Quality Specialist, jlopat@aqmd.gov, (909) 396-2138

d. VeRail Technologies: Tom Mack, President, tmack@verail.com, (513) 454-8192 office, (513) 458-9192 cell
Tier 5 to Near-Zero to ZETM: Clean Technology Switcher Locomotives
EPA Switcher Locomotive Emissions – A Brief History

Good progress reducing emissions... but
Good progress reducing emissions... but we can do better!
Trucks are barely an emissions blip compared to
Tier 4 diesel locomotives!!
Switcher Locomotive Emissions – The Future

WHEN "LOW" IS NOT LOW ENOUGH...

Tier 4 locomotives (in gray) compared to Tier 4 trucks (light green) emit much higher emissions. Natural Gas locomotives (dark green) are not only cleaner, but available soon from VeRail Technologies.
VeRail Switcher Locomotive Emissions – The Future Now

- VeRail Locomotives are designed to meet 2025’s proposed Tier 5 Locomotive emission requirements today!
  - Diesel emissions can’t even compare with VeRail NOx reductions
  - Reduction of 99.5% below pre-Tier 0 and 92.3% below Tier 4 locomotives!
  - Tier 4 diesel locomotives can produce 13x the NOx of a VeRail locomotive!

Switcher Locomotive NOx Limits (g/bhp-hr)

- Over 99% of the current U.S. switcher locomotive fleet are pre-Tier 0 to Tier 3 locomotives that produce 25x to 87x more NOx than a Tier 4 truck!
- VeRail locomotives are designed to reduce NOx by almost 99.5% below Tier 0 and an astounding 92.3% below Tier 4!
- A Tier 4 diesel switcher locomotive can produce 6.5x or more NOx per bhp-hr than a Tier 4 Truck. That’s not clean diesel!!

Reminder: VeRail locomotives produce NO Diesel Particulate Matter!
GHG Emissions Reductions

- Greenhouse Gas (GHG) Reduction
  - California Low Carbon Fuel Standard (LCFS)
    - CNG*
      - LCFS Reduction of ~22.7%* for Pipeline Gas
      - LCFS Reduction of ~81.3%* for Renewable Natural Gas (RNG)
        - RNG comes from landfills, dairy farms, wastewater plants, and other “renewable” feedstock sources
        - Because the carbon footprint for RNG is “recycled” and already accounted for, these sources totally replace non-renewable fuels and lower the GHG footprint dramatically

- CO₂ Reduction based on Pipeline Gas or Renewable NG

  30,000 diesel gallons per year locomotive
  - Pipeline Gas reduction of 76 tons per year per locomotive
  - Renewable NG reduction of 273 tons per year per locomotive

  50,000 diesel gallons per year locomotive
  - Pipeline Gas reduction of 127 tons per year per locomotive
  - Renewable NG reduction of 455 tons per year per locomotive

* LCFS Source: Carbon Intensity Lookup Table for Gasoline and Fuels that Substitute for Gas
Swicker Locomotives – Dirty to cleanest!

Metra 600 HP Pre-Tier 0 Switcher

Class I Railroad 1,500 HP Tier 0 Switcher

VeRail 600 HP to 1,200 HP
Tier 5 Natural Gas Switcher

VeRail 600 HP to 1,200 HP
Tier 5 Natural Gas Switcher

Reminder: VeRail “Tier 5” locomotives are virtually the same price as Tier 4 diesels!
VeRail Locomotives – Higher Horsepower Options

- Three Engine 1,800 HP “Road Switcher” Locomotives
- Available in 4-Axle VR18B3-nz and 6-Axle VR18C3-nz Configurations

Reminder: VeRail “Tier 5” locomotives are virtually the same price as Tier 4 diesels!
VeRail Locomotives – Higher Horsepower Options

- 6-Axle 2,100 HP Locomotives for the Most Demanding Switcher Locomotive Applications
- VeRail VR21C4-nz Locomotive
  - Heavy container train power in a single locomotive
  - Zero-Emission Battery options available
www.VeRail.com

VeRail Technologies, Inc.
“Naturally Clean” Locomotives
Powerfully Designed

Questions?

Contact: Tom Mack
tmack@VeRail.com
(513) 454-8192
Hello,

See attached for our comments on the Illinois’ draft BMP. Please let me know if you have any questions.

Thank you,

Jane Sullivan
Grant Manager/Sustainability Planner
Champaign-Urbana Mass Transit District
April 20, 2018

RE: Public input on Illinois’ draft Volkswagen Beneficiary Mitigation Plan

The Champaign-Urbana Mass Transit District (MTD) is a public transit agency located in Champaign County. MTD provides approximately 12 million passenger rides annually to the cities of Champaign and Urbana, the Village of Savoy, and the University of Illinois at Urbana-Champaign campus.

We recommend that Illinois’ Beneficiary Mitigation Plan includes a funding allocation dedicated to public transit. Specifically, we recommend that Illinois request up to 10% of the Volkswagen Trust funds allocated to Illinois for transit buses in Illinois. Funding for public transit serves the most residents of Illinois and public transit vehicles continually serve in the affected areas. Public transit agencies like MTD have the ability to execute projects in a concise timeframe. Importantly, transit agencies have experience with both proven and leading-edge technology. Investment in public transit vehicles also has the environmental benefits of mode shift, which must also be considered.Outlined below is further detail on a selection of the justifications for this recommendation.

Mode Shift

Funding for public transit impacts the environment beyond reduction of direct vehicle emissions. Transit further reduces emissions by displacing single occupancy vehicle use. Car trips are avoided through mode shift from private automobiles to transit use.

Systems of MTD’s size have an average mode shift factor of .34. MTD reported over 24 million passenger miles travelled on fixed-route bus service in 2016\(^a\). A .34 mode shift factor estimates that over 8 million miles of car travel were displaced by MTD services in 2016. This is equivalent to eliminating 3,264 metric tons of \(\text{CO}_2\text{E}\)\(^{\text{iii}}\). An average of 33.6 metric tons of \(\text{CO}_2\text{E}\) are displaced per MTD bus per year\(^{\text{iv}}\). Similar data on \(\text{NO}_x\) emission displacement was not able to be obtained at the time of this submission. However, the environmental benefits of mode shift must be considered in the equation. As transit becomes more attractive with cleaner vehicles and more advanced technology, transit ridership increases. When more people ride transit, emissions savings multiply.

Diesel-Electric Hybrid

Diesel-electric hybrid is a proven technology in the transit industry. MTD’s 2017 40-foot diesel-electric hybrid buses improve fuel economy by 54% compared to the standard diesel vehicles that they replaced. MTD has been replacing standard diesel buses with hybrids since 2009, as buses have reached eligible replacement age and mileage. On average, buses are replaced after 14 years of operation. A 40-foot hybrid bus is approximately $150,000 more than a standard diesel bus. It is recommended that the Illinois EPA consider funding this upcharge, which is about 20% of the total cost of the vehicle.

It is difficult to obtain quality, consistent \(\text{NO}_x\) emissions data for diesel and hybrid transit vehicles. To give Illinois EPA staff some idea of magnitude of \(\text{NO}_x\) reduction, I have obtained data from multiple sources:

A) King County Metro Transit\(^b\);
B) Alternative Fuel Life-Cycle Environmental and Economic Transportation tool\(^v\); and
C) National Transit Database\(^vi\) and U.S. EPA Diesel Emissions Quantifier\(^vii\).

Data collected by King County Metro Transit indicates a 40-foot diesel hybrid bus emits 20 times less \(\text{NO}_x\) than a 40-foot diesel bus. MTD buses travel, on average, 35,000 miles per year. Using the \(\text{NO}_x\) estimates from King County Metro’s report and MTD’s specific operating data, when MTD replaces a standard diesel bus with a hybrid, 8.54 tons of \(\text{NO}_x\) is saved in the vehicle’s fourteen-year lifetime. If the IL EPA funds this upcharge for a transit agency like MTD, the cost is $17,564 per \(\text{NO}_x\) ton avoided.

Argonne National Laboratory’s Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) tool does not indicate any \(\text{NO}_x\) reduction for hybrid buses compared to diesel buses but does indicate significant \(\text{NO}_x\) reduction for a 2017 diesel engine compared to a 2003 diesel engine. We believe this to be inaccurate. However, if we assume that a 2017 hybrid has, at a
minimum, equivalent NO\textsubscript{x} emissions to a 2017 diesel bus, then 4.89 tons of NO\textsubscript{x} is saved in the vehicle’s estimate lifetime (at a minimum). If the IL EPA funds this upcharge for a transit agency like MTD, the cost is $30,675 per NO\textsubscript{x} ton avoided.

Another, more conservative, approach at this calculation uses the National Transit Database and the U.S. EPA Diesel Emissions Quantifier (DEQ). These tools estimate the annual NO\textsubscript{x} output of a 40-foot diesel bus at 0.5 tons per year and the annual NO\textsubscript{x} output from a hybrid bus at 0.35 tons. Over a 14-year bus life, that results in savings of 1.79 tons of NO\textsubscript{x}. If the IL EPA funds this upcharge for a transit agency like MTD, the cost is approximately $84,034 per NO\textsubscript{x} ton avoided.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Vehicle Type</th>
<th>Lifetime tons of NO\textsubscript{x}</th>
<th>$ per NO\textsubscript{x} ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) King County Metro Transit</td>
<td>Diesel</td>
<td>8.988</td>
<td>$17,564</td>
</tr>
<tr>
<td></td>
<td>Hybrid</td>
<td>.448</td>
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<tr>
<td>B) AFLEET</td>
<td>2003 Diesel</td>
<td>5.44</td>
<td>$30,675</td>
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<tr>
<td></td>
<td>2017 Diesel</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>C) DEQ</td>
<td>Diesel</td>
<td>3.5</td>
<td>$84,034</td>
</tr>
<tr>
<td></td>
<td>Hybrid</td>
<td>1.72</td>
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</table>

In summary, if the IL EPA funds this upcharge for a transit agency like MTD, the cost is between $17,564 and $84,034 per NO\textsubscript{x} ton saved based on preliminary calculations. An obvious challenge to note is the lack of consistent data on NO\textsubscript{x} emissions. Further research may yield more accurate figures. Our hope is that the Volkswagen mitigation funding will serve as an opportunity to encourage collection of this data so that better informed decisions can be made.

Hydrogen Fuel Cell

MTD’s 60-foot fuel cell electric buses (scheduled for arrival in 2019) will eliminate 100% of NO\textsubscript{x} emissions. The cost of fuel cell technology continues to decrease, but it does not yet have quite as competitive a return on investment in NO\textsubscript{x} emissions as more common technologies. MTD still encourages Illinois EPA to consider investing in fuel cell buses, especially for transit agencies. Fuel cell technology plays a vital role in making transportation cleaner, more efficient, and better performing. Fuel cell technology is advantageous to a transit agency in Illinois like MTD because it has greater range, shorter refuel time, and lighter weight than battery electric buses. Using the same data sources described above, we conclude that if the Illinois EPA funds the upcharge of a fuel cell bus, the cost is between $44,504 and $114,286 per NO\textsubscript{x} ton saved.

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<td>Fuel Cell</td>
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<tr>
<td>B) Argonne National Lab</td>
<td>2003 Diesel</td>
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<td>Fuel Cell</td>
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<tr>
<td>C) NTD and U.S. EPA</td>
<td>Diesel</td>
<td>3.5</td>
<td>$114,286</td>
</tr>
<tr>
<td></td>
<td>Fuel Cell</td>
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Timeframe

MTD has the ability to execute vehicle procurements in a timely manner. Federal statute requires annual development of a Transportation Improvement Program (TIP) covering at least four years. The TIP includes a list of upcoming transportation projects and is developed in cooperation with the state and public transit providers. Due to this federal requirement, transit providers like MTD have vehicles procurements planned at least four years in advance with support from state and local stakeholders.

Transit agencies typically execute multi-year contracts for vehicle procurement. For example, MTD is currently in a five-year bus procurement contract with a manufacturer. The minimum purchase has been fulfilled and we have the ability to exercise options until 2021. Before the contract is complete, it is likely that we will request proposals for a contract for the next five years.

Thank you for your consideration and for the opportunity to provide public input. Please reach out if you have any questions.

Jane Sullivan
Grant Manager/Sustainability Planner
Champaign-Urbana Mass Transit District
Recommended Practice for Quantifying Greenhouse Gas Emissions from Transit, American Public Transportation Association


https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

MTD operates 97 buses in maximum service.

Feasibility of Achieving a Carbon-Neutral or Zero-Emission Fleet (March 2017)

https://greet.es.anl.gov/afleet_tool

https://www.transit.dot.gov/ntd

https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq
To Whom It May Concern:

Please find attached comments submitted by ChargePoint, Inc. regarding the Illinois EPA’s draft Beneficiary Mitigation Plan. Thank you for the opportunity to provide comment.

Respectfully,
Kevin

--
Kevin George Miller
Director, Public Policy
ChargePoint | chargepoint.com

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April 20, 2018

Brand Frost
Office of Community Relations
Illinois Environmental Protection Agency
1021 North Grand Ave.
P.O. Box 19506
Springfield, IL 62794-9506

RE: Illinois’ Volkswagen Environmental Mitigation Trust Agreement Draft Beneficiary Mitigation Plan

I. Introduction

ChargePoint is pleased to provide written responses to the Illinois Environmental Protection Agency (IEPA) regarding the best use of funds stemming from the Volkswagen (VW) settlement and the State’s allocation from the Environmental Mitigation Trust (Trust). The Trust presents Illinois with a significant opportunity to mitigate the environmental harm caused by VW diesel vehicles, as well as to advance key transportation segments that produce long-term benefits to communities throughout the State.

II. Background on ChargePoint

ChargePoint is the leading electric vehicle (EV) charging network in the world, with charging solutions in every category EV drivers charge, at home, work, around town and on the road. With more than 48,000 independently owned public and semi-public charging spots and more than 8,000 customers (businesses, cities, agencies and service providers), ChargePoint is the only charging technology company on the market that designs, develops and manufactures hardware and software solutions across every use case. Leading EV hardware makers and other partners rely on the ChargePoint network to make charging station details available in mobile apps, online and in navigation systems for popular EVs. ChargePoint drivers have completed more than 36 million charging sessions, saving upwards of 36 million gallons of gasoline and driving more than 868 million gas-free miles. For more information, visit www.chargepoint.com.

III. Summary Recommendations

- Illinois should commit the maximum 15% of its Trust allocation that is eligible for smart, light-duty electric vehicle charging infrastructure;
- IEPA should revise the unnecessarily narrow and redundant NOx-per-dollar evaluation used in prioritizing eligible mitigation actions; and
- The remaining 85% should focus on electrifying medium- and heavy-duty fleets.
IV. Detailed Recommendations

A. Illinois should commit the maximum 15% of its Trust allocation that is eligible for smart, light-duty electric vehicle charging infrastructure

ChargePoint recommends that Illinois maximize the allowable 15% for light-duty electric vehicle supply equipment (EVSE). A majority of states with a draft or final Beneficiary Mitigation Plans (BMP) have already made 15% for EVSE a stated priority. Investments in electric vehicle charging deployment will lead to the fastest and most efficient use of Trust funds. A number of charging station providers already operate in Illinois in a highly competitive market and establishing a funding program can accelerate the existing market’s activities. While some eligible categories may require years of project and selection diligence, the electric vehicle (EV) charging market is already setup to deploy within a prequalified grant program structure in a matter of months.

Funding for EVSE is needed to meet the demands of today’s 6,302 EVs in Illinois and support the projected exponential growth of EVs in years to come. In a state that currently has just 855 public EV charging spots, this small portion of Trust funds could be used to leverage matching private investment and triple the number of charging stations deployed in communities across Illinois. With 2,185 miles of interstate, Illinois ranks as the third largest interstate system in the United States. Public-private partnerships will be critical to enabling intrastate EV travel. Strategic investment from the public sector to lower financial barriers will catalyze sustainable private sector investment and reap additional economic development, energy, and environmental benefits for Illinois.

Light-duty electric vehicle charging infrastructure projects can align with a range of statewide goals and complement existing infrastructure. Current deployments in Illinois have focused around key municipalities and areas of higher EV driver density, but there are gaps to address in order to promote broader EV adoption in all communities. Illinois should determine that a funding program be designed to target areas that will drive the greatest near- and long-term utilization of charging assets. Focusing on utilization will significantly contribute to the success of the State’s deployment and amplify the full range of climate and air quality benefits. Additionally, EVSE investments can be structured to concentrate on local emissions reductions and prioritize specific non-attainment zones.

ChargePoint recommends that Illinois focus on Level 2 charging stations for municipalities and local points of interest, where people may dwell for longer periods. For DC fast charging stations, we suggest targeting sites along major transit corridors and dense urban centers.

We caution against investment in Level 1 charging, which would neither be cost-effective nor future-proofed for the latest EV models. Indeed, investments in Level 1 charging would not significantly address range anxiety and would be inadequate for meeting the long-term needs of drivers.

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1 See: http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index
B. **IEPA should revise the unnecessarily narrow and redundant NOx-per-dollar evaluation used in prioritizing eligible mitigation actions.**

ChargePoint urges IEPA to revisit its proposed criteria for prioritizing mitigation actions. The Draft BMP applies an unnecessarily narrow NOx-per-dollar test for evaluating potential mitigation actions, which fails to consider the full range of benefits associated with transportation electrification.

NOx cost efficacy was already factored when the list of eligible mitigation projects was developed.\(^2\) Beneficiary agencies have leeway to prioritize amongst these eligible mitigation actions, all of which have already passed a NOx cost efficacy test. It would therefore be unnecessary and inappropriate to re-apply this metric to further delineate eligible mitigation actions.

Moreover, applying an overly restrictive NOx-per-dollar cost-efficacy framework would actually impede Illinois' broader environmental, public health, and climate goals. Focusing exclusively on NOx cost efficacy would fail to consider the full range of climate and air quality benefits of eligible mitigation actions, which would not be in the public interest.

C. **Non-EVSE funds should focus on electrifying fleets.**

For the remaining 85% of funding not committed to light-duty EVSE infrastructure, ChargePoint encourages the state to focus on electrification over other fuel sources as the best means to achieve the intended purpose of the Trust. Focusing on the electrification of public and private fleets will lead to the greatest net transportation emissions reductions.

Given currently available technology, ChargePoint encourages the state to focus on electric buses and medium duty transit vehicles. While we support all forms of electrification, ChargePoint particularly encourages investment in vehicles that have the ability to charge on standard EV charging stations. This will allow public light-duty EVSE investments to be leveraged for bus charging and other fleet needs. Possible bus electrification programs could support regional, municipal and school bus fleets.

V. **Conclusion**

In conclusion, ChargePoint respectfully urges IEPA to ensure that the final BMP creates the most, and most sustainable, environmental, energy, and economic development value for Illinoisans by adopting our three key recommendations:

- Commit the maximum 15% of the Illinois Trust allocation that is eligible for smart, light-duty electric vehicle charging infrastructure;
- Revise the unnecessarily narrow and redundant NOx-per-dollar evaluation used in prioritizing eligible mitigation actions; and
- Focus the remaining 85% of funds on electrifying medium- and heavy-duty fleets.

\(^2\) See: [http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index](http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index)
Thank you for considering our comments. If you have any questions, please contact me at [redacted].

Respectfully,

[Signature]

Kevin George Miller
Director, Public Policy
ChargePoint
Good Afternoon,

Attached is the Illinois Chamber of Commerce’s BMP Comment Letter. Please let us know if you have any questions.

Very Respectfully,

Benjamin J. Brockschmidt
Vice President of Policy
Executive Director, Infrastructure Council

Illinois Chamber of Commerce
April 20, 2018

Brad Frost  
Illinois Environmental Protection Agency  
1021 North Grand Ave. Springfield, IL  
62794-9276

Dear Brad,

The Illinois Chamber of Commerce supports the draft Beneficiary Mitigation Plan (BMP) as proposed by the Illinois Environmental Protection Agency. The BMP should be implemented as soon as practical to avoid further delays in achieving needed environmental improvements.

The BMP provides an opportunity for small and medium-sized Illinois businesses to lower nitrogen oxides (NOx) while making expeditious improvements in fuel efficiency. Our members support the attention the BMP provides for off-road uses and the impact it will have on the trucks, tugs, and switcher locomotives in operation by these companies today.

The fact that two of the three priority areas (Chicago and Metro-East St. Louis) are also Illinois' ozone nonattainment areas further justifies the use of the funds to make investments to improve the air quality where it is needed most. As illustrated in the BMP, Illinois' point sources are a small percentage of the NOx emissions and the funds provide an opportunity for Illinois to incentivize the highest amount of reductions possible from the most significant source of NOx in the state, the mobile sources.

Illinois is the third largest state in the nation for volume of freight, both by tonnage, and value. In 2014, 1.23 billion tons of freight ($2.97T) moved in Illinois. By 2045, that will increase to over 1.72 billion tons of freight. Roughly one-third of Illinois freight is incoming, one-third outgoing, and one-third within Illinois.

By mode, water transportation moves just under 9% of our freight, rail 37%, and over 54% of freight moves by truck—less than the national average of 64%. Of these, waterways are anticipated to have the most extensive growth moving forward. Additionally, more than 40% of the total amount of freight moving terminates in the priority areas identified in the draft BMP.

The majority of the half-a-billion ton increase in freight by 2045 is and will be moved by small and medium-sized businesses, right here in Illinois. Of the 240,000 employees in
transportation and warehousing, only 6% are part of a firm with over 100 employees. The remaining 94% are those small and medium-sized businesses.

These businesses want to be better stewards of the environment but lack the resources to upgrade their equipment to the newest, shiniest and cleanest options. Part of this is the nature of owning and operating a business where nothing is certain. Part of it is the uncertain regulatory and legislative environment they work in today, and part of it is the higher starting pay and increases in wages they continue to provide.

Upgrading one tug with some of the newest technology available removes 30 tons of NOx a year, which is the equivalent of 96 trucks, three switcher locomotives, or almost 27,000 cars. This is due to the long hours of operation required in transportation, distribution, and logistics, to ensure that raw materials and finished goods arrive when needed.

Finally, a study recently released by the Illinois Chamber of Commerce Foundation found that congestion alone costs Illinois more than $8.2 billion a year and a combined total of 173 hours lost per driver across the state when all areas are totaled. As the on-demand economy continues to evolve and consumers want things even quicker, it is essential that we take steps to ensure economic and environmental responsibility.

It is necessary that the BMP is implemented as soon as practicable to avoid further delays in achieving the much-needed environmental improvements. The Chamber supports Illinois' goals for the use of the funds, and their focus on maximizing the NOx emissions reductions (and thereby maximizing environmental benefits).

Very Respectfully,

Benjamin J. Brockschmidt
Vice President of Policy
Illinois Chamber of Commerce
To Whom It May Concern:

I am writing to on behalf of BAE Systems with respect to the IL draft BMP. I would strongly recommend you consider BAE Systems’ 2nd generation hybrid electric transit buses as the most sensible investment for the IL EPA to make the most environmental and economic impact across the state.

With the attached documentation on NOx benefits and employment impact, you will realize that our product is strong win for IL residents, its clean air and its economy. For example, Champaign-Urbana highlighted local content in a press event a couple of years ago when the bought our hybrid transit buses; see news article HERE.

Our Modular Traction System (MTS) is the heart of our propulsion system. In fact, the 70 jobs across IL supporting its production is understated. We have doubled our volumes year over year over year the past three years. I am sure that this number is well over a 100 IL employees at this point.

Please let me know if you have any questions.

Thanks,
John

John Hroncich
Regional Sales Manager, US Midwest & New England
Power & Propulsion Solutions

T [redacted]
M [redacted]
E [redacted]
W www.hybridrive.com

BAE SYSTEMS
INSPIRED WORK
HybriDrive Modular Traction Systems
Local manufacturing, global impact

Wisconsin
- Brookfield, WI Machining
- Elkhart Lake, WI Casting
- Manitowoc, WI Casting
- Racine, WI Machining
- Pleasant Prairie, WI Assembly and Testing

Illinois
- Elburn, IL Form/Weld
- Mundelein, IL Plastic Molding
- Chicago, IL Steel Lamination Manufacturing
- Carol Stream, IL Electronics
- Des Plaines, IL Plastic Molding/Machining
- Champaign, IL Forging
- Chicago, IL Custom Products

HybriDrive Related Jobs
Wisconsin Total = 189
Illinois Total = 70
VOLKSWAGEN CONSENT DEGREE
ENVIRONMENTAL MITIGATION TRUST
BENEFICIARY MITIGATION PLAN

Illinois Environmental Protection Agency (IL EPA)

Brad Frost
Manager, Office of Community Relations
217/782-7027
brad.frost@illinois.gov

VW Mitigation Funding Beneficiary Plan Suggestion

BAE SYSTEMS
INSPIRED WORK

Category 1: DERA Type Projects

Electric Hybrid Transit Buses

Submitted by:

Mr. John Hroncich
BAE Systems
**Statement of Purpose**
As a suggestion for inclusion in to Illinois’ Volkswagen (VW) Consent Decree Environmental Mitigation Trust Beneficiary Plan, BAE Systems would like to propose the deployment of next-generation electric hybrid transit buses across various transit agencies. With the help of VW Mitigation Trust funding, these buses would deliver significant NOx, HC, PM and CO emissions reductions to counties across Illinois. Because electric hybrid buses are a proven, grid-independent (they don’t require grid charging) bus technology, they can be deployed quickly at any transit bus fleet in any operating environment (ex. long driving range, extreme temperature, severe grades).

**Introduction**
BAE Systems is an industry leader in clean, efficient electric hybrid powertrains for transit buses. Since the late 1990’s, we have fielded over 8,500 of our HybriDrive® Propulsion Systems at transit agencies across the United States, Canada and Europe.

HybriDrive Propulsion Systems feature our proprietary electric motor/generator, power electronics and energy storage systems which supply 100% pure electric power to a transit bus’ driveline. In a hybrid configuration, we use a smaller-than-average diesel engine as a genset to create electricity and augment electric power captured during regenerative braking. In an engine-less, zero emission bus configuration, we can power the bus with just batteries or with a hydrogen fuel cell (as we do today with a fuel cell bus operating at Boston’s MBTA).

Electric hybrid transit buses are a sensible option for Illinois’s VW Mitigation Trust Beneficiary Plan:
- They can be deployed anywhere – including Illinois’s most rural counties
- They are plug-free! Hybrid transit buses do not need additional infrastructure
- We can leverage existing state, local and federal dollars for transit procurement as cost share
- Hybrid buses are drop-in fleet solutions providing emissions benefits on Day #1
- Hybrid buses are proven technology with a robust supply base and servicing options
- Hybrid buses are a conservation technology...we save fuel and emissions. We don’t create upstream emissions like all-electric buses and we aren’t a replacement fuel like compressed natural gas or propane buses

**Project Description**
Using VW Mitigation Trust funding, we would like to deploy 25 next generation electric hybrid transit buses at transit agencies across Illinois’ transit agencies. Agencies such as Chicago Transit Authority (CTA) or Champaign-Urbana Mass Transit District (CUMTD) are examples of viable locations for this deployment.

Transit agencies would utilize their existing bus procurement dollars, a combination of federal, state and local monies, as cost share. This would allow the VW funding to cover the incremental cost of a hybrid bus over a conventional diesel bus.

By utilizing VW funding for hybrid buses by **BAE Systems**, DES would be getting three tangible benefits over conventional diesel transit buses:
1. Up to 20x the NOx savings vs. the diesel buses they would be replacing
2. Significant operational dollar savings at the transit agency through fuel savings
3. Anti-idle, zero emission transit bus operation via engine stop/start technology
**Impact Statements**

**Estimated $/NOx ton benefit**

According King County Metro’s *Feasibility of Achieving a Carbon-Neutral or Zero Emission Fleet (March 2017, pg 19)* report, a 40-foot diesel hybrid bus emits 20x less NOx than a 40-foot diesel bus (See Figure 1).

Table 1 – Emissions Benefits of Hybrid over Diesel Transit Buses

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>CO₂</th>
<th>NOₓ</th>
<th>PM₁₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-foot diesel bus</td>
<td>2,444</td>
<td>16.64</td>
<td>0.14</td>
</tr>
<tr>
<td>40-foot diesel-hybrid bus</td>
<td>1,611</td>
<td>0.82</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source: King County Metro’s Feasibility of Achieving a Carbon-Neutral or Zero Emission Fleet (March 2017)

Using the National Transit Database and the U.S. EPA Diesel Emissions Qualifier, we can estimate the annual NOx output of a 40-foot diesel bus at 0.5 tons/year. Over a 14 year bus life, that’s 7 tons of NOx coming from a diesel bus. The equivalent NOx from a hybrid bus would be 0.35 tons.

The estimated $/NOx ton benefit of using VW funding for hybrid transit buses is $31,578/NOx ton saved.

**Estimated fuel savings (operational spending)**

BAE Systems’ electric hybrid powertrain is a fuel conservation, not fuel replacement, technology. Each year, BAE Systems’ global hybrid bus fleet saves over 15 million gallons of diesel fuel for its transit operators.

The estimated dollar savings of a BAE Systems electric hybrid bus at a Illinois transit agency, over the bus’ life, is $91,000 (26,000 gallons of diesel * $3.50/gallon).

**Estimated anti-idle benefit**

Thanks to BAE Systems industry-leading engine stop/start technology for transit buses, we estimate that each of these VW-funded electric hybrid buses will operate about 35% of its revenue-generation hours with its engine off. Transit agencies often refer to our hybrid buses as ‘part-time all-electric buses’.

The estimated number of hours that BAE Systems’ electric hybrids will operate with its engine off, bringing zero emission transit to Illinois’s streets, over its lifetime is 9,000 hours.

**Budget**

<table>
<thead>
<tr>
<th>Appendix D: DERA Type Projects</th>
<th>Per Unit Cost</th>
<th>Unit Count</th>
<th>Grantee Match</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 4-8: School Bus, Shuttle Bus, or Transit Bus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eligible buses)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transit Buses - Hybrids (gov’t owned)</strong></td>
<td>$700,000</td>
<td>25</td>
<td>70%</td>
<td>$5,250,000</td>
</tr>
</tbody>
</table>

Twenty-five next-generation electric hybrid buses could be deployed across Illinois transit agencies utilizing just 25% of Illinois’ VW Mitigation funding.

**BAE Systems’ Point of Contact**

John Hroncich
On behalf of the Association of Global Automakers and our member companies we submit the attached letter urging Illinois to allot the full 15% allowed under Appendix D of the VW Settlement for light duty electric vehicle infrastructure.

Sincerely,

Isabel

Isabel Villa-Garcia
State Government Relations Manager
Global Automakers

GlobalAutomakers
April 20, 2018

Illinois Environmental Protection Agency
Attn: Alec Messina, Director
1021 North Grand Ave. East
Springfield, IL 62794

Dear Director Messina:

RE: Maximizing Settlement Fund Allocation for Charging and Hydrogen Refueling Infrastructure

The Association of Global Automakers (Global Automakers) represents the U.S. operations of international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. In 2016, our members manufactured 42% of all new motor vehicles and 69% of green technology vehicles sold in Illinois.

Global Automakers and our members have a longstanding commitment to improving air quality, reducing greenhouse gas emissions, and increasing fuel efficiency. Our members are investing heavily in alternative fuel and green technologies, including being the first to successfully launch hybrid electric vehicles 20 years ago and since then plug-in and fuel cell electric vehicles. We are proud that the number of electric-drive vehicles, in a variety of options and price points, are increasing every year.

Under Appendix D of the Volkswagen settlement, Illinois is due to receive $108 million, which can be used for a variety of environmental-based projects. A maximum of 15% of this money, or $16.2 million, can be used for the acquisition, installation, operation, and maintenance of electric vehicle infrastructure.

Global Automakers urges the State of Illinois to allocate the full 15% towards this effort and to support all electric vehicle infrastructure – charging stations and hydrogen refueling stations. The state needs to establish a strong foundation for electric vehicles by expanding its network of charging and building out a network of hydrogen refueling stations to support sales of electric vehicles. Increasing available infrastructure is critical to the state’s ability to advance electrification. Range anxiety is a significant impediment to sale of electric vehicles.

In 2017, Illinois’ electric-drive emission vehicle sales made up of 0.6% of new vehicles sold. Investment in electric vehicle infrastructure responds to this problem while furthering air quality and supporting customers in your state that choose to buy an electric vehicle.
Should you have any questions, please do not hesitate to contact us. Thank you for your consideration of our request, and your continued support of electrification.

Sincerely,

Damon Shelby Porter
Vice President
Government Affairs

Julia M. Rege
Director
Environment and Energy
From: Messina, Alec  
Sent: Friday, April 20, 2018 2:13 PM  
To: Frost, Brad  
Subject: FW: Lake County Letter Regarding IEPA’s Draft Mitigation Plan

From: Fetherston, Paul  
Sent: Friday, April 20, 2018 7:49 AM  
To: Messina, Alec  
Subject: [External] Lake County Letter Regarding IEPA’s Draft Mitigation Plan

Dear Director Messina:

On behalf of Lake County Board Chair Aaron Lawlor and Lake County Board of Health President Tim Sashko, please find Lake County’s comments pertaining to IEPA’s Draft Mitigation Plan related to the VW Settlement. The comments have also been submitted directly to the IEPA email specifically established for the draft mitigation plan.

Please contact me if I may be of any assistance.

Regards,

Paul J. Fetherston

Paul J. Fetherston  
County Administrator’s Office  
Assistant County Administrator  
www.lakecountyil.gov

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attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
April 16, 2018

Alec Messina, Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

RE: VW Settlement Beneficiary Mitigation Plan

Dear Director Messina:

The Illinois Environmental Protection Agency (IEPA) developed and distributed a draft Beneficiary Mitigation Plan (Plan) to address Illinois’ use of the Trust’s funds. With $108 million initially allocated from the Trust to the State of Illinois, we urge you to take the fullest advantage of this significant opportunity by funding projects intended to reduce emissions of nitrogen oxides across our communities.

Lake County – part of the priority one zone – supports a Plan that distributes Trust funds in a way that results in a meaningful reduction of emissions through an equitable system with stated objective criteria which prioritizes communities in non-attainment zones with the highest incidents of air pollution. In our respective capacities, we submit to you that the current draft Plan falls short.

Lake County supports a sustainable environment through its adopted Strategic Plan goal to “Preserve the health of our natural resources, air quality ... through the widespread use of environmentally sustainable management practices...”. As a means to that end, the Strategic Plan identifies a strategy that leverages ‘existing tools and partnerships ... to change behaviors and practices.’ Since the draft Plan has not been developed openly and collaboratively in a manner that leverages partnerships, we believe the Plan requires additional time and public process.

The draft Plan requires additional work to develop buy-in, partnerships and strategies that effectively shift behaviors, practices and results in meaningful emissions reductions. As such, we ask that implementation of the draft Plan be deferred until a meaningful, transparent and accessible public input process occurs. In addition, we offer the following input on the further development of the Plan for the effective implementation of the Trust funds:

1. Design and implement a thorough public process that provides for meaningful input and dialogue and leverages existing tools and partnerships. Such a process should include public meetings across the state, including in Lake County.
2. Develop a Plan that includes a meaningful allocation of funding to support diversification of alternative fuel government fleets.
3. Ensure that the Plan articulates objective criteria that will lead to the funding of requests with the greatest emissions reduction affects. In order to appropriately evaluate changes in air quality in Lake County, it is also recommended that enhanced and relocated air quality monitoring equipment (e.g., PM2.5) be installed in a central Lake County location rather than only monitoring ozone at Illinois Beach State Park North unit.

As partners in the reduction of emissions in a manner that benefits our communities and State, we look forward to a collaborative and innovative process that results in the implementation of an effective Plan.

Regards,

Alec Messina
Director
Illinois Environmental Protection Agency

Aaron Lawlor
Lake County Board Chair

Timothy Sashko
Lake County Board of Health President

Cc: The Honorable Bruce Rauner, Office of the Governor
Lake County Board
Lake County Board of Health
Good afternoon,

Please see attached.

Thank you.
Pam/Eric

Pam Cummings / Eric Wong
Aide to the President/Scheduler
Office of the President
Dear Director Messina:

Thank you for the opportunity to provide comments on the Illinois Environmental Protection Agency’s Proposed Volkswagen Beneficiary Mitigation Plan. As you know, this funding provides a unique opportunity to address significant mobile source pollution in order to support a healthy environment for all Illinoisans and to achieve significant emission reductions across the state, especially in those communities most impacted by vehicle pollution.

I am pleased to see that the IEPA has identified the six county metropolitan Chicago area as a priority area in the plan. As you develop the program guidelines, I would like to encourage you to continue to use these same factors to determine the priority of funding so that those communities most impacted by the affected cars receive the benefit of the mitigation funds. As you note in the plan, nearly 32% of the affected cars were registered in Cook County and 70% of the census block groups in the state that meet the IEPA definition for Environmental Justice areas are located here.

I would also like to encourage you to advertise the program as widely as possible, and to specifically reach out to smaller municipalities and other local governments to offer technical assistance so that a current scarcity of resources doesn’t preclude the opportunity to apply for and receive the benefit of the mitigation plan money. These are often the areas that are most impacted by mobile source pollution and have the highest health impacts for their residents. I would be happy to assist with this outreach at the appropriate time.

Thank you for the opportunity to comment, and I look forward to seeing the final Beneficiary Mitigation Plan, along with working together to finalize the program.

Thank you,

Toni Preckwinkle
President

April 20, 2018
Dear Chief Armitage,

We appreciate the opportunity to submit the attached letter and enclosed school bus fact sheet, which provides comments and recommendations on the published VW Settlement draft Illinois beneficiary mitigation plan. Additionally, we welcome the occasion to discuss and refine our proposed strategy further with your team.

Thank you for your kind consideration.

Sincerely,

Chelsea

--
Chelsea Jenkins
Executive Director
Government Affairs
ROUSH CleanTech

www.ROUSHcleantech.com
www.ROUSH.com
www.ROUSHFenway.com
Submitted via email to epa.vwsettlement@illinois.gov

April 20, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

As the President of ROUSH CleanTech (ROUSH), I write to thank the Illinois Environmental Protection Agency (IL EPA) for the opportunity to comment on the Beneficiary Mitigation Plan (Draft Framework). Alternative fuel vehicles provide Illinois with the opportunity to dramatically decrease NOx emissions over even the cleanest diesel vehicles in addition to providing fleet organizations with lifetime economic and other indirect benefits. Propane school buses, transit buses and class 4-7 vehicles in particular offer a cost-effective strategy to reduce NOx emissions and improve public health. ROUSH would like to support your efforts through the assistance of our partnership including a national network of Blue Bird, Ford and other local dealerships. Over 12,000 propane-fueled buses in more than 800 school districts nationwide have been deployed by Blue Bird dealers such as Central States Bus Sales in your state. Collectively, ROUSH partners have helped deploy over 19,000 alternative fuel vehicles that have accumulated over 450 million miles.

  **Recommended Draft Framework Revisions**

As one of the leading manufacturers and suppliers of alternative fuel technology, our company and partners have first-hand knowledge of the necessary demands particular fleet organizations have when implementing new technology. We are also intimately familiar with overcoming barriers and ensuring customer success through careful planning and after-market support. For these reasons, we have provided some background information and data to support our recommended revisions to the draft framework, below. We respectfully request IL EPA consider the following modifications:

1. A set-aside of at least $30 million for a Clean School Bus Program. Furthermore, prioritize and/or incentivize alternative fuels. This could be achieved through various methods, such as:
   - A specific carve out within the Clean School Bus Program to only include alternative fuels (i.e. $20M of the $30M for alternative fuel vehicle projects)
   - Prioritizing alternative fuel applicants over other applications
   - Providing more incentive to an alternative fuel vehicle application over diesel (i.e. fund 50% of propane vehicle, and 10% of diesel vehicle)
   - Considering NOx cost-effectiveness when considering project funding requests

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1 ROUSH CleanTech is an industry leader of alternative fuel vehicle technology focused on developing innovative and reliable propane fuel systems for fleets across North America.
2. Dedicating more funding to on-road projects and prioritizing alternative fuels, similar to the above recommendations for a school bus program. Nestle, Alpha Baking, Bloomington Transit, Bimbo and DuPage County are among fleet organizations already operating alternative fuel vehicles in IL, and willing to expand operation based upon funding opportunities. Offering more on-road project support would also help indirectly grow alternative fuel infrastructure in the state, without needing to dedicate state or other funding.

3. Including opportunities for rural counties. Rural counties tend to operate older, dirtier diesel vehicles and also have longer routes resulting in longer exposure times. Rural counties also have more funding challenges, and less resources to access non-traditional funding resources.

4. Using AFLEET as an emissions modeling tool for certain application comparisons as the data is more closely aligned with current technology. For example, the EPA Diesel Emissions Quantifier does not recognize our low NOx propane engine or in-use emissions.

We’ve provided some additional information to consider, which supports our above recommendations.

Propane School Buses Offer the Most Cost-Effective Solution to Reduce NOx Emissions

ROUSH’s model year 2017 propane school buses recently received its CARB certification at 0.05 grams NOx per brake horsepower-hour (g/bhp-hr).2 This new propane engine is 75 percent cleaner than today’s cleanest diesel engines that are compliant with the model year 2010 standard of 0.2 g NOx / bhp-hr and 99 percent cleaner than the oldest, pre-2007 model year buses still operating in many school districts today.3 What’s more, ROUSH is also actively working to obtain CARB certification at 0.02 g/bhp-hr NOx making it among the cleanest school bus available, especially when considering in-use emissions impacts as described in the next section.

These cleaner propane buses significantly reduce children’s exposure to emissions that are associated with pre-2007 model year buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.4 Propane school buses also effectively eliminate diesel particulate matter emissions that are associated with cancer and thousands of premature deaths nationwide every year. These vehicles are a safe transportation solution because propane is non-toxic, non-carcinogenic and non-corrosive, and because their vehicle fuel tanks are 20 times more puncture-resistant than gasoline or diesel tanks.5

Propane school buses are a smart investment for Illinois fleets and businesses. Fuel cost reductions of 60 percent per gallon and operations and maintenance savings of $0.37 per mile,

3 For model year 1998 to 2003 diesel engines, EPA established a NOx emission standard of 4.0 g NOx / bhp-hr. Please refer to EPA’s summary table of diesel engine exhaust emission standards for further detail.
as compared to diesel, are documented. Propane school buses can thus support your agency’s efforts to achieve cost-effective NOx emissions reductions.

School Buses Present an Opportunity for Immediate Air Quality and Public Health Benefits
There are almost 10,000 model year 2009 and older school buses in operation in Illinois that qualify for replacement under the Environmental Mitigation Trust criteria. Our joint analysis with Central States Bus Sales shows the state could quickly and cost-effectively replace over 600 school buses with an investment of $30 million.

The potential air quality benefits and the cost to achieve those are the most important data points to consider, in our opinion. Using lifecycle emissions data calculations from the 2017 ANL AFLEET tool with in-use adjustment shows that alternatives to diesel represent the most cost-effective way to reduce NOx emissions.

*Table 1. NOx Reduction and Cost Effectiveness Results Comparing Diesel, Propane, CNG and Electric School Buses Over a 15 Year Service Life.*

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Purchase</th>
<th>NOx Reduced</th>
<th>$/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td>$93,000</td>
<td>911.9</td>
<td>102</td>
</tr>
<tr>
<td>CNG</td>
<td>$125,000</td>
<td>836.8</td>
<td>149</td>
</tr>
<tr>
<td>Diesel</td>
<td>$85,000</td>
<td>85.8</td>
<td>991</td>
</tr>
<tr>
<td>Electric</td>
<td>$350,000</td>
<td>1,137.2</td>
<td>308</td>
</tr>
</tbody>
</table>

As shown in Table 1, there is minimal variance in the NOx reductions achieved between the alternative fuel options over the service life of a school bus. The diesel option, however, shows a significant decrease in emissions reduction opportunity over the life even despite their meeting current EPA standards. Propane is the lowest cost alternative and is also the most cost-effective alternative at reducing NOx in most cases and in school bus applications specifically. In fact, propane is 92% more cost effective than diesel at reducing NOx emissions in school buses as can be seen in the enclosed document.

Consider In-Use Emissions Data and Prioritize and Incentivize Alternatives to Diesel
We encourage the state to prioritize or incentivize alternatives to diesel use caution when funding new diesel vehicles and equipment. We believe there is a growing evidence manual of data to support this decision. Several studies are highlighted below.

First, West Virginia University revealed that diesel school buses produced 26 times the amount of NOx as propane school buses in a duty-cycle representative of most school buses. The Propane Education & Research Council (PERC) contracted the West Virginia University (WVU) Center for Alternative, Fuels, Engines, and Emissions to perform a research program testing in-

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**ROUSH CleanTech | 12170 Globe St. | Livonia, MI 48150**

**800.59.ROUSH | ROUSHcleantech.com**
use emissions and performance of propane versus diesel fueled engines in a school bus application.

A 2014 model year propane and diesel school bus were chosen for testing so that the school buses would have at least 25,000 miles logged. A total of 9 test routes were performed, including cold starts, hot starts and stop and go routes. Three stop-and-go route test results averaged 5.2 g/mile for the diesel school bus while the propane bus averaged 0.2 g/mile with minimal variability in measurement.\(^7\) In other words, propane was 96% cleaner than diesel school buses over the test cycles. It is worth noting, the 2014 propane and diesel school buses used for testing met the same 0.2 g/bhp-hr certification standard, as ROUSH had not launch the low NOx engine option yet.

Second, recent analysis by the International Council on Clean Transportation (ICCT) indicates that negative health impacts from diesel-sourced NOx emissions are increasing, despite regulatory limitations.\(^8\) Indeed, laboratory-certified vehicles met mandatory emission limits but exceeded NOx emission limits for heavy-duty diesel vehicles, by 1.45 times on average in real world operation. These excess diesel NOx emissions contributed to an estimated 1,100 premature deaths in the United States in 2015.\(^9\)

Last, new test data published by the University of California at Riverside indicates that the selective catalytic reduction (SCR) systems on today’s new diesel vehicles fall short of controlling NOx emissions in many duty cycles.\(^10\)

Conclusion
ROUSH CleanTech recognizes the benefits of alternative fuel diversification and has committed to doing just that by providing its school bus and commercial vehicle customers with propane autogas, CNG and other alternative fuel power products. As we prepare for the future of school bus and other transportation, ROUSH again commits to supplying its customers with a diverse, reliable set of alternative fuel engine technologies so that customers have a comprehensive solutions provider.

ROUSH CleanTech would like to work with you and your team to ensure the most cost-effective and environmentally beneficial use of Illinois Volkswagen Settlement Funds. We thus request a phone or in-person meeting with the most appropriate member of your staff to discuss propane and other alternative fuels opportunities.


\(^{10}\) Borioonsomsin, K. "Real-World Activity Patterns of Heavy-Duty Vehicles and Their implication on In-Use Emissions". ARB Research Seminar, May 31, 2017. [https://www.arb.ca.gov/research/seminars/borioonsomsin/borioonsomsin.pdf].
Thank you for considering our request. We look forward to continued dialogue with you and your team, and to a future collaboration that will help Illinois meet its air quality goals.

Sincerely,

Todd Mouw
President
ROUSH CleanTech

Enclosure
Blue Bird Vision Propane
The Most Cost-Effective Solution to Reduce NOx Emissions from School Buses

School buses transport 25 million children across the U.S. to and from school each year. Because of the stop-and-go driving conditions, diesel buses emit increased exhaust emissions filled with tiny soot particles and toxic gases. Using the Volkswagen Environmental Mitigation Trust (EMT) to fund propane buses enables states to meaningfully reduce this harmful exposure, which benefits our nation’s children.

**PROPAANE**
- Purchase price: $95,000
- NOx reduced: 894 lbs.
- Cost per pound of NOx reduced: $106

**DIESEL**
- Purchase price: $90,000
- NOx reduced: 67 lbs.
- Cost per pound of NOx reduced: $1,330

**ELECTRIC**
- Purchase price: $300,000
- NOx reduced: 1,119 lbs.
- Cost per pound of NOx reduced: $268

92% more cost-effective than diesel school buses

60% more cost-effective than electric school buses

*Vehicle purchase price may vary by state. Calculations assume the full cost to deploy the cleanest commercially available Type C buses for each fuel type based on emission calculations from the 2017 ANL AFILET Tool with diesel in-use adjustment.

750+ School transportation fleets in operation

12,000+ School buses in service across North America
The Union of Economic and Environmental Sustainability

The Blue Bird Vision Propane offers an unmatched ROI for school transportation fleets. States can feel confident that the investments made with the Volkswagen EMT funds will lay the foundation for schools to continue deploying low-emission buses.

Low-Emission Engine
The Roush CleanTech engine is certified to the optional low NOx level 0.05 g/bhp-hr, making it 75% cleaner than the EPA’s current emissions standard.

Best Total Cost of Ownership
By switching from diesel to propane, fleets can lower their fuel costs up to 50% and enjoy increased up-time with reduced maintenance.

Uncompromised Safety
The Blue Bird Vision Propane is noticeably quieter than a diesel bus, enabling the driver to remain focused on both the children and the road ahead.

Clean American Energy
Propane autogas burns far cleaner than diesel. And, because it is domestically sourced, fleets are protected from the fuel price fluctuations that frequently occur with diesel.

“With today's tight school budgets, using a transportation fuel like propane autogas that saves taxpayers' money, keeps the environment clean, and keeps jobs within our national borders is a win-win for everyone.”

— William Schofield, Superintendent
Hall County Schools, Gainesville, Georgia

For more information on how to successfully develop a clean school bus program in your state, contact:

Chelsea Jenkins
Executive Director of Government Affairs
chelsea.jenkins@roush.com
734.812.1965.
Good Afternoon,

Please see the attached letter from the Village of Orland Park in regards to the BMP/VW Settlement. Thank you.

Best,

Heather Zorena, MPA
Management Analyst | Public Works |  |  | IP: | E: 

ORLAND PARK
April 20, 2018

Comments Regarding Beneficiary Mitigation Plan for Illinois

Dear Mr. Frost:

Thank you for taking the time on April 3rd, 2018 to address the Metropolitan Mayors Caucus and also for summarizing the current draft of the Beneficiary Mitigation Plan (BMP) for Illinois. Though the Village of Orland Park does not currently have any viable projects that would fit the draft as proposed, there are several comments that we would like to make in regards to this plan.

Our primary concern stems from the lack of municipal participation in its creation and very limited municipal opportunity in this plan. Other states have been engaged in the process of generating a BMP since 2016. As we understand, Illinois did not even construct a strategy to engage the public until 2018. This delay has now created urgency at the end and not all stakeholders were given sufficient time to address the plan as currently proposed. An advisory committee should be created to draft grant program rules and provide oversight. We do not believe the current plan needs to be completely dismantled, rather adjusted to accommodate municipalities such as the Village of Orland Park.

The draft BMP allocates 65% for non-road applications (most commonly referenced as locomotives). This is excessive. More funding needs to be allocated to diesel vehicles, especially those of class 4-8, regardless of use (i.e. firetrucks and plow trucks). There is more opportunity for emissions reductions with these types of vehicles within the Village of Orland Park as well as many of our surrounding communities.

Finally, there needs to be a provision for municipal fleets. These vehicles are providing essential services to residents. By investing in these types of greener fleets, the village is able to demonstrate the importance of safe and sustainable means of transportation. Without incentives such as the VW Settlement funds, it is difficult to support a greener fleet as municipal vehicles do not generate revenue, nor do they have higher mileage which would see the return on investment at a faster pace.
The Beneficiary Mitigation Plan needs to provide for more municipal involvement. When compared to other states, Illinois is far behind in seeking input from all stakeholders. Please take into consideration the Village of Orland Park’s comments as well as the comments provided from our surrounding neighbors so that we may all benefit from the emissions reduction that is possible from this plan.

Sincerely,

[Signature]

John J. Ingram
Village of Orland Park
Director of Public Works
Yates, Evan

From: Sam Barghi
Sent: Friday, April 20, 2018 3:58 PM
To: EPA.VWSettlement
Cc: Phil Modaff
Subject: [External] Village of Carol Stream Public Works Department VW Settlement Public Comment
Attachments: Village of Carol Stream Public Works VW Settlement Public Comment.pdf

Good Afternoon:

Please accept the attached document as the comments of the Village of Carol Stream Public Works Department for Illinois' Draft Volkswagen Beneficiary Mitigation Plan.

Thank you,
Sam Barghi
--
Sam Barghi
Public Works Management Analyst | Village of Carol Stream

[Contact information]

[Logo: Carol Stream Public Works]
April 20, 2018

To Whom it May Concern:

The Village of Carol Stream Public Works Department reviewed the Illinois EPA’s Draft Beneficiary Mitigation Plan and has various concerns including, but not limited to:

1. The Illinois EPA’s Interpretation of the Consent Decree
   a. Define EMA’s by performance, not vehicle type
      NOx reduction is a function of:
      1. engine horsepower
      2. operating hours
      3. duty cycle
      4. amount of fuel consumed
      5. age of the engine being displaced/repowered
      6. type of engine, fuel, and after-treatment being employed in the solution and
      7. whether the change relates to locomotives vs. truck engines, which have different emission standards, and the emission standards that are being applied (e.g. Tier 0 vs. Tier 4).

      NOx production is not generally related to whether the vehicle is used for freight hauling, construction, snow plowing, people-moving, fire-fighting, etc. The engine is the source of emissions. IEPA’s proposed interpretation of Class 4 to 8 should not determine if a vehicle is eligible or ineligible because it travels the interstate to deliver goods, mixes concrete, or provides services to the public, including protecting the public’s health and safety.

   b. Consent Decree Definitions
      The Consent Decree (Appendix D-1, Definitions) indicates what is included, by way of example, but does not explicitly exclude certain types of vehicles. The Consent Decree allows, EMA-6 “Class 4-7 Local Freight Trucks (Medium Trucks)” and EMA-1 “Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)” which should be interpreted to include vehicles that meet the performance definition and serve priority populations, identified in the draft BMP. This should include emergency-response vehicles and all public service vehicles in these vehicle classes. Strictly interpreting “freight” trucks might exclude public sector fleets that directly impact target populations.

      The Consent Decree, Appendix D-1, defines eligible vehicles are model years 1992 to 2006, unless the Beneficiary provides additionally for model years 2007 through 2012. If these newer models are to be included, it must be made clear in Illinois’ final BMP.
2. EMA Allocations

A. Reduce proposed allocations

The draft BMP proposed allocation of 65% for non-road applications (notably locomotion), 10% for electric buses and only 20% for all included public and private trucks (Class 4 to 8) overly favors non-road applications. Allocations in the final Illinois BMP should be substantiated based on issues raised above.

To be clear, the proposed allocation 65% for non-road is excessive. This is out-of-line with non-road allocations made by other states and fails to focus benefits on the target populations in Illinois. Further, US DOT has historically provided and currently provides CMAQ funds to subsidize cleaner locomotives. Reallocation VW funds more appropriately to diesel vehicles, Class 4-8 better serves IEPA’s stated BMP objective to “maximize and leverage funding”.

Further, the cost assumptions for the reduction in NOx for non-road and on road are not stated, yet are very important to decision-making. The cost to make a single locomotive Tier 4 from Tier 0 can cost between $2.5 and 7 million, depending on whether a new engine or a repowered engine is applied and whether an alternative fuel to diesel is applied. Typical costs to change a truck to cleaner vehicles range from $20,000 to $100,000, depending on a range of factors. For the low end of the truck range ($20,000), this translates into 125 to 350 trucks for every locomotive, from a grant funding perspective.

The proposed allocation of 10% for all electric school buses is not substantiated by performance or cost-effectiveness. According to IEPA’s own website, electric school bus engines are shown to have the lowest potential emissions reductions of all EMA’s. While the BMP estimates performance outcomes for both on-road projects (100 tons NOx/year) and off-road projects of 1,700 tons NOx/year), there is no estimate provided for the reduction potential for conversion to all electric school buses. From proposed allocations, cost per ton of NOx reduced can be estimated for on-road projects (EMA 1, 2 and 6) at 0.217 $MM/ton; and non-road projects (EMA 3 and 4) at 0.042 $/MM ton. This comparison cannot be calculated for all electric school buses and this proposed carve-out is unsubstantiated based on the goal of NOx reduction.

B. Establish a public-sector allocation

A more equitable and effective carve-out should also include public Class 4-8 trucks which show greater potential for emissions reduction than school buses. This allocation category should include all public-sector vehicles, Class 4-8, including public transit and school buses should total 30% and should allow applicants to determine the optimal clean fuel choice for their use.

C. Use DERA funds

As stated, under EMA 10, Diesel Emission Reduction Act (DERA) funds may be leveraged for replacement or repower of passenger locomotives. This same process should be applied to truck engines within the DERA definitions for eligible Class 4 through 8 vehicles. This would leverage matching DERA funding to allow more public fleets to participate in the greening of their fleets.
3. Invest in Municipal Fleets

It is important to prioritize municipalities as beneficiaries of VW mitigation funds for many reasons. Public fleets provide visible and essential public services to residents equitably throughout the non-attainment area, and specifically within target areas of VW ownership and environmental justice priorities. Investment in cleaner municipal fleets provides demonstrable localized benefits. Municipalities are trusted to make decisions for public benefit, including choices for safe, sustainable public fleets. The visible nature of investment in public fleets will provide corresponding momentum for the growth and acceptance of greener fuel choices throughout the non-attainment area.

Municipalities are prepared to participate in vehicle conversions that will help achieve target emission reductions. The Municipal Fleet Managers Association is well-versed in alternative fuel technologies and supports transition to cleaner fuels for appropriate public service vehicles. Eighty-five Greenest Region Compact communities formally support the goal to “operate a safe, clean and efficient fleet”.

Further, incentives are more critical to assure public fleet success than they are for private and non-road sectors. Municipal fleets do not generate revenue that can support cleaner fuel conversions and they are allowed neither tax incentives nor depreciation allowances available to private fleets. There is comparatively lower mileage and fuel use for most public fleets, making adequate return on investment difficult to achieve, despite strong localized public benefit.

4. General Clarification

While it is understood that the VW Settlement funds will cover the repower or replacement of vehicles, it is unclear whether this covers only the replacement of the cab and chassis, or if all necessary components of the truck will be covered by the grant. For example, many of our larger trucks are used for snow removal operations and must be outfitted with a stainless steel bed, hydraulics, pumps, lighting, and other electronics in order to handle the tasks it will be assigned to. If only the cab and chassis are covered by the Beneficiary Mitigation Plan, it will drastically and negatively impact the relevance of this grant opportunity for many Public Works Departments.

Thank you for your time and consideration of our comments.

Sincerely,

Philip J. Modaff
Director of Public Works
Dear Director Messina and staff of the Illinois Environmental Protection Agency,

Please find attached a letter from Anne Kelly, on behalf of the Ceres BICEP (Businesses for Innovative Climate and Energy Policy) Network. The BICEP Network, made up of 46 major companies many of whom have operations and facilities in Minnesota, urge you to strengthen the mitigation plan for the use of the Volkswagen settlement funds and elect to maximize spending from the EMT funds for charging infrastructure, zero emission and near zero emission vehicles.

A swift transition to a cleaner transportation system will benefit Illinois' economy by reducing spending on petroleum- based fuels while enhancing public health through the reduction of air pollution.

I hope these suggestions are a meaningful contribution to state planning for Minnesota's clean transportation future. Please feel free to reach out if you would like to discuss this further.

Sincerely,
Sarah

Sarah Tyler
Senior Associate, State Policy
Ceres

Follow us on Facebook, LinkedIn and Twitter!

Join us in Boston at Ceres Conference 2018, April 24th-26th - Register today!
April 20, 2018

Illinois Environmental Protection Agency
1021 North Grand Ave. East
Springfield, IL 62702

RE: Comments on Illinois Volkswagen Settlement Beneficiary Mitigation Draft Plan

Dear Director Messina:

As the representative of a network of major employers and large energy users across the United States, I am writing to you on behalf of the Ceres Business for Innovative Climate and Energy Policy (BICEP) Network—a coalition of 46 major companies, many of whom have operations and facilities in Illinois. We are writing to encourage the Illinois Environmental Protection Agency (IEPA) to strengthen the mitigation plan for the use of the Volkswagen settlement funds. These funds present an opportunity to have a measurable impact on Illinois’ air quality, carbon emissions, and economy by catalyzing the transition to cleaner vehicles, vessels and public transit system. The current draft plan does not capitalize on this opportunity; unfortunately, it fails to fully leverage the capacity of these funds to reduce carbon emissions and foster a market in which electric vehicles can thrive.

BICEP Network members are working to reduce emissions in their own business operations, and they support policies that help to accelerate the transition to a clean, low-carbon economy. Accordingly, the Environmental Mitigation Trust (EMT) funds should be used to support a fundamental market transformation that will set Illinois on a pathway toward significant long-term emissions reductions in the transportation sector through the deployment of zero and near-zero emission vehicles. To strengthen the plan and bring it into alignment with these goals, we offer the following recommendations:

- We encourage the state to allocate the maximum amount (15 percent or $16.2 million) of EMT funds on charging infrastructure for light-duty plug-in electric vehicle charging stations. While we applaud the current percent allocation toward all-electric school buses, investment in light-duty vehicle charging infrastructure is essential if the market for electric vehicles is to
thrive. Investment in charging infrastructure will further close the infrastructure gap and address "range anxiety." A recent report by Ceres and M.J. Bradley & Associates found that the benefits of increased investment in electric vehicle charging infrastructure outweigh the costs by more than 3 to 1. Neighboring states including Michigan, Minnesota, Missouri, and Ohio recognize these benefits, and have designated the full 15 percent of their funds towards electric vehicle charging infrastructure.

- **We encourage that all-electric or hydrogen vehicles be prioritized where feasible.** If practicable, full reimbursement should be reserved for electric or hydrogen vehicles or vessels, rather than new diesel or alternate fueled vehicles.
- **We strongly support prioritizing investment in communities disproportionately affected** by higher levels of pollution, non-attainment or maintenance areas, or designated Federal Class 1 areas. We encourage the IEPA to provide further details on options that can fully leverage the capacity for EMT funds to help reduce local air pollution in environmental justice areas.

More broadly, the public input process undertaken by the IEPA during the development of the plan lacks transparency. While the IEPA has sought stakeholder input, it is not clear how comments were received and evaluated or how differing perspectives were incorporated. In addition, the IEPA VW survey is poorly designed and limits feedback from participants. We encourage the IEPA to modify the survey and establish a formal stakeholder process to further refine the state plan and include consideration of aggregate stakeholder responses within the next draft.

We urge Illinois to strengthen its plan and elect to maximize spending from the EMT funds for charging infrastructure, zero emission and near zero emission vehicles. A swift transition to a cleaner transportation system will benefit Illinois' economy by reducing spending on petroleum-based fuels while enhancing public health through the reduction of air pollution.

Thank you for your consideration.

Sincerely,

Anne Kelly  
Senior Director, Policy and BICEP Network, Ceres  
On behalf of Ceres BICEP Network

For more information on the Ceres BICEP Network visit: https://www.ceres.org/networks/ceres-policy-network
Yates, Evan

From: Skerjan, Mark [removed email]  
Sent: Friday, April 20, 2018 4:16 PM  
To: EPA.VWSettlement  
Subject: [External] VW Settlement Plan Comments  
Attachments: Nicor Gas VW Comments.pdf

To whom it may concern:

Please see the attached comments from Nicor Gas. Thank you for your assistance.

Mark Skerjan  
Director, Legislative Policy & Analysis  
External Affairs  

南方公司燃气
April 20, 2018

Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Dear Sir or Madam,

Nicor Gas respectfully submits the following comments on the best use of the Environmental Mitigation Trust (EMT or Trust) funds the state will receive as part of the Volkswagen (VW) diesel emissions settlement. When all factors are considered, natural gas vehicles offer the best solutions for projects that will address the goal of the EMT, which is to reduce the most nitrogen oxide (NOx) for the least cost.

Most importantly, we believe it would be more beneficial to fund alternative fuel vehicle programs instead of paying for new diesel vehicles. Dollar for dollar natural gas vehicles yield the most NOx reduction per dollar of investment.

Medium Duty and Heavy Duty vehicles powered or repowered by natural gas engines deliver NOx reductions greater than current EPA standards. The new Low NOx natural gas engines are certified 90% lower than the EPA standard to which new diesel trucks are certified. If diesel vehicles are to be funded, in addition to funding for natural gas vehicles, then diesel vehicles should be funded at a lower percentage than natural gas vehicles such that the cost effectiveness in dollar per pound of NOx reductions is the same.

For example, if a public refuse fleet receives 100% funding to purchase a CNG garbage truck at a cost of $300,000 each and reduces NOx by 2,141 lbs. this would be equivalent to $140/lb. of NOx emissions reduced. In this case, a new diesel garbage truck costing $270,000 and reducing NOx by just 1,417 lbs. should only receive 75% funding to achieve the same $140/lb. cost effective use of the funds. Additional information and examples can be found at: http://www.ngvamerica.org/vwsettlement/ and http://ngvgamechanger.com/

Nicor Gas also believes the state should target funding for technologies that have demonstrated lower in-use emissions. A University of California Riverside study on port truck emissions found the Low NOx natural gas engine emitted lower NOx emissions than its EPA certification standard. Emissions decreased as the duty cycles decreased (i.e., slower speeds, idling, stop-and-go traffic.) In contrast, the new diesel trucks emitted up to 10 times more than their certification standard at these duty cycles. See the following link for the report: http://www.cert.ucr.edu/research/efr/NOx-Fact-Sheet.pdf

Prioritizing funding for projects with commercially available products should be a priority. Virtually every kind of vehicle targeted in the VW settlement is already available in a natural gas option from several manufacturers. Natural gas refuse trucks, Class 8 tractors, straight trucks, transit buses, shuttle buses and school buses have a demonstrated history of reliable, cost effective operations. In contrast, most
similar vehicles from other competing technologies are just now becoming commercially available or still under development and testing. The VW settlement is intended to make the most impact possible to mitigate NOx, not for supplementing pilot projects or new product commercialization.

Staying flexible in plans and leveraging private investment to stretch dollars and get more alternative vehicles on the road would also prove to be beneficial. The VW settlement provides for up to 100% funding of alternative fuel vehicles for public fleets, and only up to 25% (or 35% if using DERA option) for private fleets. This means private fleet investment dollars can be leveraged to achieve up to 4X the amount of NOx reduction for the same dollars as funding public fleets. (This benefit would be compounded further by the fact private fleets vehicles tend to use more fuel than public fleets, particularly in the short-haul trucking sector.) The state should prioritize funding for private fleets and give the private sector first opportunity to utilize the funds over the first year or two, perhaps with a minimum percentage of the funds designated for public fleets.

We would welcome the opportunity to meet with you or your staff to share additional information on how natural gas vehicles can play an important role in maximizing the benefit of this funding opportunity. Please let me know if you have any questions about natural gas vehicles at this time or would like to go ahead and schedule a meeting.

Sincerely,

Dorothy Odell Foster
Director, Government Affairs
Thank you for the opportunity to comment on this important program. Please see CDOT’s comments attached.

Best Regards,

Samantha Bingham
Clean Transportation Program Director
Chicago Department of Transportation

This e-mail, and any attachments thereto, is intended only for use by the addressee(s) named herein and may contain legally privileged and/or confidential information. If you are not the intended recipient of this e-mail (or the person responsible for delivering this document to the intended recipient), you are hereby notified that any dissemination, distribution, printing or copying of this e-mail, and any attachment thereto, is strictly prohibited. If you have received this e-mail in error, please respond to the individual sending the message, and permanently delete the original and any copy of any e-mail and printout thereof.
April 20, 2018

Mr. Brad Frost  
Illinois Environmental Protection Agency  
1021 N Grand Ave East  
Springfield, IL 62794-9276

Rc: Illinois’ Draft Volkswagen Beneficiary Mitigation Plan

Dear Mr. Frost:

The Chicago Department of Transportation (CDOT) is pleased to provide comments on the Illinois Environmental Protection Agency’s (IEPA) draft Beneficiary Mitigation Plan (BMP), Illinois’ strategy to distribute $108 million for emissions reduction projects from the Volkswagen (VW) Environmental Mitigation Trust. The City of Chicago (City) is a nationally recognized leader in municipal sustainability, dedicated to improving regional air quality, reducing petroleum consumption and greenhouse gas emissions, and creating sustained economic resilience through the deployment of innovative, sustainable transportation technologies.

In brief, CDOT recommends:
- Prioritizing funding for projects in communities that will most benefit from diesel emissions reductions and improved air quality;
- Requiring transportation safety equipment on all participating vehicles as a funding condition, to further enhance the public health benefits of the program;
- Investing in light-duty electric vehicle charging infrastructure; and
- Allocating more funding for on-road projects.

**BMP Priority Funding Areas**

The purpose of the VW Environmental Mitigation Trust is to invest in mitigation actions that will reduce NOx emissions primarily from diesel transportation sources, especially in disadvantaged communities. CDOT concurs with IEPA’s analysis of Priority Funding Areas in Illinois. However, IEPA did not disclose in the draft BMP how funding applications will be evaluated. CDOT supports equitable evaluation criteria that will result in maximum investments in communities where direct emissions reductions will benefit those who need it most.

**City Fleet**

The City of Chicago is well suited to participate in IEPA’s BMP program. The City has a large diesel fleet, ambitious sustainability goals and expertise in clean fleet technologies. The group of vehicles that seem to most align with IEPA’s stated BMP goals is the City’s refuse fleet. Of the 524 refuse vehicles the City operates, 124 of them would qualify for replacement under the program’s terms. Private refuse operators normally replace their refuse trucks after 7 to 10 years of operation. The City of Chicago operates our fleet vehicles for much longer due to budget constraints. For example, City refuse trucks are typically in service for
16 years. If a 2006 refuse vehicle is replaced early with a new diesel, the emissions benefit would be over 400 lbs of NOx\(^1\).

The Chicago Department of Aviation (CDA) is evaluating opportunities to electrify airport ground support equipment (GSE). CDA estimates that there are nearly 4,000 pieces of GSE at O’Hare. CDA has determined that repowering and replacing diesel-powered GSE with all-electric models is the most environmentally friendly alternative that will provide emission reductions while still maintaining operational needs. Currently, IEPA has very narrowly defined what off-road equipment is eligible under the draft plan and has excluded GSE. Diesel emissions reductions at O’Hare benefit not just City residents but also the many other DuPage and Cook County communities bordering the airports. Under the draft BMP, IEPA has excluded funding for GSE despite the Federal VW Settlement Agreement explicitly allowing GSE. CDOT recommends funding GSE as a cost-effective opportunity to significantly reduce NOx. In Cook County, GSE contribute as much or more NOx than marine ferries and tugs.

The Chicago Transit Authority (CTA), the second largest public transportation system in the United States and a City sister agency, provides efficient, clean transportation to 1.6 million people each day. In October 2014, the CTA introduced two all-electric buses into service claiming the title of the first major U.S. transit agency to use all-electric buses as part of daily service. The CTA has announced plans for a major expansion of its electric bus fleet by as many as 45 buses. CDOT supports CTA’s investment in zero-emissions transit buses that yield significant emissions reductions and are highly visible to the communities they serve and will help inform CTA’s future bus procurements.

**Safer Truck Initiative**

As trucks are disproportionately represented in bicycle and pedestrian fatalities nationally, the IEPA has an opportunity to further enhance public health and meet the goals of IDOT’s “Driving Zero Fatalities to Reality” initiative by coupling implementation of the VW plan with transportation safety equipment requirements, just as the City of Chicago is already doing. CDOT is leveraging our own Drive Clean Truck voucher incentive program with our Vision Zero plan and truck sideguard ordinance to require participating fleets to include truck side guards and blind-spot mirrors on their vehicles in order to be eligible for vouchers. IEPA could implement a similar requirement for Mitigation Trust funding eligibility.

Truck side guards are designed to prevent vulnerable road users from being killed in the event of a side-impact collision. In some instances, side guards can also improve fuel efficiency. Side guards are currently required in Japan, European Union countries, the United Kingdom, Brazil and on certain trucks in Boston and New York City. Volpe, the U.S. Department of Transportation’s National Transportation Systems Center, developed a truck side guard specification that will assist U.S. fleets to procure effective safety equipment. The latest version of Volpe’s specification is found at https://www.volpe.dot.gov/our-work/truck-side-guards-resource-page. Based on research by Volpe and other cities, we expect the average cost of side guards to be minimal ($1000 to $1800 per vehicle).

The Illinois Motor Vehicle Code currently addresses the need for mirrors to enhance driver’s field of vision (625 ILCS 5/12-502). Optional mirrors (convex and cross-over mirrors) can be added to trucks to mitigate blind spots and provide drivers with a better view of vulnerable road users. These mirrors cost less than $200 to purchase and install.

The average on-road truck deployed through the IEPA’s BMP will cost tens to hundreds of thousands of dollars. Truck side guards and improved mirrors are relatively low-cost safety equipment that comprise just a fraction of a truck’s total cost. If IEPA requires these road traffic crash countermeasures it will help put safer

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\(^1\) Analysis conducted using Argonne National Laboratory’s Heavy-Duty Vehicle Emissions Calculator: https://afleet-web.es.anl.gov/hdv-emissions-calculator/
trucks on Illinois’ roads and help advance the goals of IDOT’s “Driving Zero Fatalities to Reality” efforts. Furthermore, in some instances, side guards can improve fuel efficiency.

Strategic Investment in Charging Stations
CDOT encourages IEPA to reevaluate the decision not to fund light-duty electric vehicle charging stations through the BMP. CDOT has heard IEPA’s concern about the risk of investing in underutilized equipment. CDOT recommends that IEPA be strategic in where stations are located, targeting high-mileage commercial EV fleets, workplaces, and multiunit dwellings. Through the BMP, the State will have significant resources it could invest in priority light-duty charging.

IEPA has an opportunity to work with EV rideshare fleets in Chicago who can serve as anchor users for DC Fast Chargers in the region. The growing fleet of EV rideshare drivers has illustrated the need for additional fast charging infrastructure in key locations. DC Fast Chargers along I-55, I-290, I-90 and I-94 (highlighted in the map below) are necessary to support these EV ride share drivers near the communities where they live and work. Recently the USDOT announced most of the highways in the Chicago area as priority ZEV corridors. Investments in DC Fast Charging along these highways will serve local high-mileage EV fleets in addition to regional travelers.

Per capita, EV adoption is higher in the Chicago suburbs than in the city. A major factor is that 70% of Chicago residents live in Multi-Unit Dwellings (MUDs) where access to charging can be challenging. EVs can have greater market penetration if MUD owners and managers are encouraged to provide residents access to charging. Incentives directed at MUDs coupled with outreach and educational materials can help reduce charging barriers for more Illinois residents. Publicly accessible, fast charging stations that primarily support commercial EV fleets can additionally benefit MUD residents who do not have charging access as home.
Additional Funding for On-Road Projects
In 2010 the IEPA provided the 2008 emissions inventory for Cook County. Per this dataset, on-road diesel vehicles are responsible for 29% of NOx emissions while the locomotive and commercial marine sectors comprise 3% and 1%, respectively. Since on-road diesel vehicles are responsible for a significant amount of NOx and other emissions such as greenhouse gases in Cook County, IEPA’s 30% funding allocation to on-road projects seems low. CDOT recommends increasing the amount for on-road funding.

Thank you for the opportunity to provide comments on IEPA’s BMP. Please feel free to contact me directly at [email address] or by phone if you have any questions or need assistance.

Sincerely,

[Signature]

Samantha L. Bingham
Clean Transportation Program Director
Brad,

Attached, please find the Illinois Attorney General’s Office’s comments on the Illinois EPA’s draft Beneficiary Mitigation Plan in connection with the Volkswagen Settlement. Please let me know if you have any questions.

Thanks,
Angad

Angad S. Nagra
Assistant Attorney General
Environmental Bureau

Please consider the environment before printing this e-mail.
April 20, 2018

VIA ELECTRONIC MAIL

Brad Frost
Illinois Environmental Protection Agency
Office of Community Relations
1021 North Grand Avenue East
Springfield, Illinois 62702
EPA.VWSettlement@Illinois.gov

Re: Comments on IEPA’s Draft Beneficiary Mitigation Plan, Dated February 2018, Pursuant to Volkswagen Settlement

Dear Mr. Frost:

On behalf of the Illinois Attorney General’s Office (“AGO”), we are writing to provide our comments on the Illinois Environmental Protection Agency’s (“IEPA” or “Agency”) Draft Beneficiary Mitigation Plan (“BMP”) proposing Illinois’ plan for allocating funds received pursuant to the Volkswagen Environmental Mitigation Trust Agreement for State Beneficiaries (“Trust Agreement”). The Agency issued the Draft BMP in February 2018 and initially requested responses on or before April 13, 2018, then extended the comment deadline to April 20, 2018.

Comment 1. Section 4.1 of the Trust Agreement requires that a beneficiary state’s BMP include an explanation of the process by which that state will seek and consider public input on its BMP. To that end, Section IV(G) of the Agency’s Draft BMP states that “[o]ver the past year, the Agency has communicated and met with numerous interested stakeholders regarding administration of Volkswagen Trust funds in Illinois.” The Draft BMP further notes that “[t]o reach and inform a broad range of public and potential applicants, and to make public participation easy and convenient, the Agency has established a Volkswagen settlement webpage . . ., set up a survey and e-mail to solicit input, and will be promoting these tools through social media, direct e-mail notification, speaking events and a press release.” Finally, the Draft BMP states that it is being made available for written public input, which will be accepted through April 20, 2018.

Prior to publishing the Draft BMP, the IEPA’s process of obtaining public input was informal and not publicized and therefore exclusionary. Given the wide range of environmental and public
health interests at stake in matters involving air pollution, the AGO believes that a more formalized and accessible process for soliciting and considering public comment on the BMP is essential. In order to ensure an optimally transparent and inclusive decision-making process, we propose the Agency include the following requirements for sharing information and soliciting public input:

1. Post all public comments;
2. Prepare and post a response to public comments;
3. Convene public meetings to provide information on the BMP and to solicit in-person feedback from members of the public; and
4. Post and provide opportunity for public comment for any future revisions to the final BMP.

Comment 2. Section IV(G) of the Draft BMP states that the Agency “will post information and updates” to a webpage it has created for the Volkswagen settlement, and that such updates will include the final BMP and subsequent revisions.

In the interest of full transparency, the Agency should also consider posting project applications, a list of approved projects, and regular updates (perhaps on a monthly basis) on implementation status of the final BMP (including any final reports of completed projects and an updated accounting of how much money has been spent on each project, including administrative expenses incurred by IEPA).

Comment 3. The Trust Agreement allows beneficiary states to use proceeds from the settlement trust to cover up to 100% of the cost of any eligible vehicle upgrades or replacements if those vehicles are owned by government entities. Illinois EPA’s draft BMP provides that it will require a cost share of at least 25% for government entities.

In light of the high cost of certain eligible vehicle upgrades or replacements (e.g., purchasing an electric-powered school bus, which is estimated to cost in excess of $200,000) and the potential limited funding available to schools, municipalities and other cash-strapped branches of local government, the AGO seeks clarification from the Agency as to whether, in such cases and under appropriate circumstances, the Agency intends to consider, on a case-by-case basis, using proceeds from the settlement trust fund to cover the full cost of eligible projects, particularly in Environmental Justice areas.

Comment 4. Section 4.1 of the Trust Agreement requires that a beneficiary state’s BMP include a general description of the ranges of emission benefits expected to be realized by implementation of eligible projects. In Illinois, the eligible projects fall into three general categories outlined in Section IV(D) of the Agency’s draft BMP: (1) on-road projects; (2) all-electric school bus projects; and (3) off-road projects. For the on-road and off-road categories, the Agency’s draft BMP states that IEPA expects annual NOx emissions reductions of 100 and 1,700 tons, respectively, which is based on a purported analysis of “a sample of” eligible mitigation actions. For the on-road category, that sampling of eligible mitigation actions purportedly included “replacing Class 4-8 trucks, transit and school buses with new clean diesel, natural gas, propane, electric, and hydrogen versions.” For the off-road category, that sampling of actions purportedly included “repowering or replacing switcher locomotives, tug boats, and passenger locomotives.”
It is unclear how the Agency arrived at these estimated emissions reductions. Although the Draft BMP notes that “[a]ctual emissions reductions will be dependent on the types of projects ultimately selected for funding and the final funding percent allocations,” the AGO seeks clarification from the Agency regarding the assumptions underlying these calculations as well as a description of some of the other variables that could ultimately affect their accuracy. We also request clarification from the Agency as to why there is such a significant disparity in anticipated NOx emission reductions from the on-road projects and the off-road projects.

**Comment 5.** The Trust Agreement and the Agency’s Draft BMP allow “[e]ligible vehicles and equipment [to] either be repowered with a newer, cleaner diesel, alternate fuel, or electric engine, or replaced entirely with a new diesel, alternate fuel, or electric vehicle.”

Given that Volkswagen’s much-hyped “clean diesel” engines were essentially revealed to be a hoax (proving unable to simultaneously achieve the promised levels of power, fuel efficiency and clean emissions), the AGO seeks clarification from the Agency concerning the environmental and emissions-related benefits it expects from the “cleaner diesel” engines it proposes to retrofit eligible vehicles with, and what types of trade-offs the agency believes such engines will need to make between clean emissions and power and fuel economy in order to realize those benefits.

Thank you for your consideration of these comments. We can be reached at the telephone numbers and email addresses listed below should you have any questions or wish to discuss our comments.

Sincerely,

Matthew J. Dunn, Chief
Environmental Enforcement/
Asbestos Litigation Division
Illinois Attorney General’s Office
100 South Second Street
Springfield, IL 62706

ADDITIONAL CONTACT:
Angad Nagra, AAG
Dear Mr. Frost,

On behalf of Chicago Department of Aviation (CDA) Deputy Commissioner of Environment Aaron Frame, attached please find the CDA’s comments on the IEPA’s Draft Beneficiary Mitigation Plan for the Volkswagen Mitigation Trust. Please let me know if you have any questions or comments. Thank you for the opportunity to provide input.

Sincerely,

Casey

Casey Venzon, LEED AP BD+C | Managing Consultant

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April 19, 2018

Mr. Brad Frost
Illinois Environmental Protection Agency
1021 N. Grand Avenue East
Springfield, IL 62794-9276

Subject: Volkswagen Mitigation Trust – Illinois Draft Beneficiary Mitigation Plan

Dear Mr. Frost:

The Chicago Department of Aviation (CDA) is thankful for the opportunity to provide comments on the Illinois Environmental Protection Agency’s (IEPA) Draft Beneficiary Mitigation Plan. The CDA encourages the IEPA to include the electrification of diesel airport ground support equipment (GSE) in eligible project allocation of funding. As specifically noted in the USEPA settlement agreement with Volkswagen, airport GSE are prime candidates for reducing diesel emissions by replacing them with electric GSE.

The CDA owns and operates both Chicago O’Hare International Airport and Chicago Midway International Airport. Both airports are in Cook County, Illinois, which is designated by the U.S. Environmental Protection Agency (USEPA) as a marginal nonattainment area for the 8-hour average ozone (O₃) National Ambient Air Quality Standard. Combined, O’Hare and Midway serve over 1.1 million flights and 100 million passengers annually, and are important economic engines for Chicago and the state of Illinois.

Airport operations at O’Hare alone are supported by nearly 4,000 pieces of GSE, of which there are about 1,000 diesel-fueled cargo/baggage tractors, belt loaders, and aircraft pushback tractors that serve both passenger and cargo aircraft. These types of GSE, of which 80 percent are 10 years old or older, are prime candidates for replacement since proven electric versions of these GSE are readily available and already in use at many airports. At O’Hare, each piece of GSE is estimated to operate for an average of 3,300 hours annually and use over 6,000 gallons of diesel fuel per year, creating substantial opportunity for immediate emissions reduction. According to the USEPA’s Diesel Emissions Quantifier, replacing these 1,000 diesel-fueled GSE with electric GSE would eliminate over 800 tons of oxides of nitrogen (NOₓ) per year.

The CDA has and continues to support our many airline partners as they transition their existing GSE fleets and supporting infrastructure away from conventional fossil fuels. The CDA remains committed to further supporting reductions in diesel emissions and enhancing our sustainability and environmental goals. Transitioning away from diesel GSE towards electric GSE supports
the City of Chicago’s goal to reduce greenhouse gas emissions by 25 percent below 1990 levels by 2020, and by 80 percent by 2050, as outlined in the *Chicago Climate Action Plan*. We applaud IEPA’s focus on reducing emissions, especially in highly urbanized environments, and request that IEPA reconsider the Draft Beneficiary Mitigation Plan to include airport GSE.

Please do not hesitate to contact me at [redacted] if you have any questions or need any additional information.

Sincerely,

Aaron J. Frame
Deputy Commissioner of Environment

AJF/erp

cc: Samantha Bingham, Chicago Department of Transportation
    Eugene Peters, Ricondo & Associates
    CDA Environment Division file
Brad,

Attached, please find comments from the Chicago Transit Authority (CTA) on IEPA’s draft Benefit Mitigation Plan for Volkswagen settlement trust funds.

Please don’t hesitate to contact me if you have any questions regarding the attached comments.

Thank you for the opportunity to provide comments on the draft plan.

Regards,
Kate Tomford

Kate Tomford
Senior Analyst, Energy
Finance Department
Chicago Transit Authority (CTA)
April 20, 2018

Mr. Alec Messina
Director
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

Dear Director Messina:

I am writing to provide comments on the Illinois Environmental Protection Agency’s (IEPA) draft Beneficiary Mitigation Plan (BMP) for the Volkswagen Environmental Mitigation Trust Fund (Trust). This plan was developed by IEPA to establish the spending priorities and allocations for the $108.7 million that Illinois is set to receive as a state beneficiary of the Trust.

The Chicago Transit Authority (CTA) plays a critical role in reducing emissions from the transportation sector in Illinois. On an average weekday, CTA provides over 1.53 million rides on its bus and rail transit systems. CTA has a fleet of 1,864 buses that travel more than 161,000 miles per day on average, and 1,456 electric rail cars that travel more than 233,000 miles per day on average. A full 60-foot articulated CTA bus replaces more than 70 cars, and a full eight-car CTA train replaces more than 600 cars. By providing an affordable and time-efficient alternative to individual automobile use, CTA’s transit services also reduce congestion on roadways throughout the region and encourage compact development.

CTA’s service area is located entirely within the U.S. Environmental Protection Agency’s (USEPA) nonattainment area for lead, sulfur dioxide, and ozone.¹ The service area covers over 308 square miles of Chicago and 35 suburbs, and comprises a population of 3.3 million. CTA provides 81% of public transit trips in the six-county Chicago metropolitan area.

CTA encourages IEPA to recognize the following points in determining the allocation of Illinois’ Trust funding and the prioritization of projects within the funding allocation categories:

1. **Transit provides a multiplier effect for investments in diesel emissions reduction projects.**

   The emissions benefits of upgrading transit vehicles greatly exceed just the avoided emissions from those vehicle replacements. Investments in transit vehicles yield numerous benefits for transit agencies and the regions they serve: greater transit service reliability, lower maintenance costs, and higher quality customer experience. These benefits drive increases in ridership, which in turn yield more displacement of automobile trips region-wide, reduce regional roadway congestion, and generate more revenue for agencies to invest in further service enhancements.

   In this way, transit provides a multiplier effect that serves to amplify the emissions reductions of vehicle replacements. Investments in commercial or industrial vehicles, in contrast, provide only the benefit of avoided emissions from the particular vehicles replaced. To the opposite effect,

¹ [https://www3.epa.gov/airquality/greenbook/ancl.html](https://www3.epa.gov/airquality/greenbook/ancl.html)
investments in infrastructure for consumer vehicles encourage more individual automobile
ownership, single occupancy vehicle commutes, and the associated pattern of sprawling
development. For these reasons, CTA believes IEPA should prioritize transit projects to receive Trust
funding.

2. **On-road projects deliver emissions reductions focused in the areas of Illinois with the worst air
quality, the highest percentage of environmental justice block groups, and the highest concentration
of affected Volkswagen vehicles.**

Illinois should focus Trust funding on upgrades to vehicles that spend the most operating time, and
the greatest percentage of their operating time, in areas of the state most affected by poor air
quality and Volkswagen’s deceptive sales.

The emissions reductions from locomotive and freight truck projects are geographically dispersed,
whereas urban on-road projects provide emissions reductions targeted to the specific locations that
the draft BMP identifies as the highest priority areas. CTA’s transit buses all operate within Cook
County. In contrast, freight truck, regional commuter rail, and interstate passenger and freight rail
operations extend far beyond the urban core into less polluted counties and even out of state.²

The following statistics support CTA’s view that Cook County should be the primary target location
for air pollution mitigation efforts funded by the Trust.

- **Cook County’s air quality is the worst of the counties within the Chicago Area nonattainment area.**
  In its “2016 Illinois Air Quality Report” (the most recent year available), IEPA showed that the “Chicago Sector” areas — including the city of Chicago, North & West Suburbs, and South & West Suburbs — had greatest percentage of days with
  moderate and unhealthy Air Quality Index ratings, a measure based on the six criteria air
  pollutants identified under the Clean Air Act.³

- **Cook County contains an unduly high number of environmental justice communities, where
  minority populations bear a disproportionate risk of exposure to environmental health
  hazards.** As IEPA states in its draft BMP, “…based on the [Illinois Environmental Protection]
  Agency’s environmental justice public participation policy and mapping tool, approximately
  69.8 percent, the highest percentage, of environmental justice block groups in the State are
  in Cook County.”

- **Cook County has the greatest burden of air pollution from Volkswagen’s deceptive sales of
  vehicles with defeat devices.** “Approximately 32 percent [of affected Volkswagen vehicles]
  are registered in Cook County alone with the highest concentration of affected Volkswagen
  vehicles per square mile located in and just north of the Chicago Loop.”

3. **Ample funding need exists for on-road clean transit projects in the 10-year timeframe of the Trust
funding disbursement; CTA is poised for rapid implementation with additional funding.**

Of CTA’s fleet of over 1,800 transit buses, about 25% will reach the end of their expected life by
2022. By 2026, about half — more than 900 of today’s buses — will be due for replacement. At a cost
of $550,000 for each new 40-foot diesel bus, the cumulative funding need for fleet replacements is
$495 million through 2026. Running buses beyond their expected life results in higher emissions,
less reliable service for CTA customers, increased maintenance costs for CTA, and the need to keep

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³ 2016 Illinois Air Quality Report, p.25. http://www.epa.illinois.gov/Assets/iepa/air-quality/air-quality-
reports/2016%20Annual%20Air%20Quality%20Report%20Final.pdf
more spare buses in the fleet. With Trust funding for these replacements, CTA could retire the fleet’s oldest and highest-emitting buses early, yielding air quality and public health benefits in addition to cost savings.

Replacing diesel buses with electric buses will entail covering higher costs for vehicle purchases and charging infrastructure, but lower ongoing operational costs will help offset these initial investments. CTA is committed to purchasing 20 to 30 electric buses and five en-route fast-chargers this year, and is fortunate to be the recipient of federal grant funding toward this project. A procurement process is currently underway for a base order of 20 electric buses plus purchase options for up to 25 more, in combination with associated charging infrastructure. According to CTA’s estimates based on Argonne’s Heavy-Duty Vehicle Emissions Calculator\(^4\), one electric bus replacing one 2003 model year diesel bus (CTA’s 6400 Series), retiring early by two years, would result in over 2,650 pounds of avoided NOx, over 72 pounds of avoided PM2.5, and about 500 short tons of greenhouse gas emissions.

While grant funding secured to date will cover the base purchase of electric buses and chargers, CTA will only be able to execute the full extent of purchase options if further funding becomes available. If further funding is available, the established contract and charging infrastructure will enable CTA to rapidly purchase and deploy more electric buses with minimal administrative costs and operational adjustments. CTA has already planned for this scale-up in the current design for electric bus service and charging infrastructure construction.

4. **On-road projects directly improve local air quality for vulnerable and disadvantaged populations, and in environmental justice areas.**

   In its draft BMP, IEPA recognized the importance of close-range air pollutant exposure for vulnerable populations, as demonstrated by its proposal to award up to 10% of Trust funding to electric school buses. The use of electric school buses entirely eliminates their tailpipe emissions in the immediate vicinity of school children, who are proportionally more susceptible to contaminated air than adults.

   By extension, IEPA’s prioritization of neighborhood-level emissions benefits for vulnerable populations should apply to on-road projects, too, and be reflected accordingly in the allocation of funding. CTA’s bus routes travel through communities with among the highest asthma rates in the state.\(^5\) Residents of urban communities with high levels of environmental contamination are, in a disproportionate number of cases, the same individuals who rely on public transit as their primary means of transportation. These populations include concentrations of both youth and the elderly. Reducing the emissions of heavy-duty vehicles traveling on neighborhood streets, or idling at bus terminals adjacent to community shopping centers, provides a direct and local health benefit to these most vulnerable individuals.

5. **On-road projects offer the greatest consumer visibility, educational benefit, and market transformation value.**

   The value of Illinois’ VW Settlement funding extends beyond the goal of offsetting emissions from vehicles with defeat devices that were sold in our state. This is an opportunity for Illinois to deploy

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\(^4\) [https://afleet-web.es.anl.gov/hdv-emissions-calculator/](https://afleet-web.es.anl.gov/hdv-emissions-calculator/) (assumes 35,000 annual miles and a 15-year lifetime for the electric bus)

\(^5\) [http://www.healthcarereportcard.illinois.gov/maps](http://www.healthcarereportcard.illinois.gov/maps)
advanced clean transportation technologies in a way that educates consumers, drives broader adoption, and informs future policy and funding decisions. Vehicles and equipment purchased with Trust funding will likely remain in service for decades, so these technology choices and funding decisions will have long-lasting effects on the dominant technologies of the future.

On-road projects offer the greatest potential to demonstrate next-generation clean transportation technologies to consumers and policy-makers. Buses and trucks are highly visible in our cities and our communities. Illinois residents of all ages take transit buses to school and work each day, crossing paths with these vehicles on streets, at intersections, and in parking areas. The high visibility and consumer engagement level of on-road projects makes them a priority for the unique funding availability that the Trust created.

Thank you for the opportunity to provide comments on the IEPA’s draft Benefit Mitigation Plan. We are pleased to participate in the process to develop a plan that will yield the greatest benefits for our state, and we look forward to this ongoing collaboration with the IEPA.

Sincerely,

Jeremy Fine/
Chief Financial Officer
Chicago Transit Authority (CTA)
Respectfully submitted,

Susan Mudd
Senior Policy Advocate
Environmental Law & Policy Center
April 20, 2018

Director Alec Messina
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276
Email: EPA.VWSettlement@illinois.gov

RE: Comments of the Environmental Law & Policy Center Regarding Use of Volkswagen Environmental Mitigation Trust Funding in the State of Illinois

Dear Director Messina,

We thank the Illinois Environmental Protection Agency for this opportunity to provide comments on IEPA’s draft Beneficiary Mitigation Plan (BMP) for the allocation of funds from the Volkswagen Environmental Mitigation Trust Agreement in the State of Illinois. ELPC respectfully offers the following comments and suggestions for improving the BMP, and wish to underscore three specific points. First, we strongly support the IEPA’s proposal to commit 10% of the funds for electric school buses. Children are especially vulnerable to asthma and other breathing ailments and their routine exposure to school bus fumes is a serious public health concern. Second, we recommend that the BMP include using the full allowable 15% allocation for light duty electric vehicle charging stations.

Finally, we believe the principal reason there have been strong objections to the IEPA draft is that it places considerably more emphasis on off-road priorities than any other state with which we are familiar. By dedicating 65% to off-road projects, the BMP inherently makes fewer dollars available for electric charging stations, municipal transit systems — including CTA buses, and projects to aid communities historically overburdened by the effects of pollution. We sincerely hope that the IEPA will revise its draft plan and direct more of the VW mitigation funds toward on-road priorities.

Allocate Specific Funds for Electric School Buses

School buses represent the largest category of mass transportation in our country.¹ Emissions from fossil fuel school bus engines contribute to significant negative health problems in children. Electrification of school buses provides an effective means to improve children’s health and reduce school absenteeism. It also provides the opportunity to strengthen resiliency of the electric grid and support greater integration of renewable energy. We strongly support IEPA’s 10% carve out for electric school buses in the Draft BMP.

Last summer, Illinois residents in Chicago welcomed an electric school bus on a Midwest tour sponsored in part by Illinois-based electric utility ComEd. School staff, parents, teachers, and students were impressed by the quiet and fumes-free bus.

The federal government has recognized the importance of jump-starting the transition to bus electrification through the Low-To-No Emission Vehicle Program which offers funding to purchase zero-

emissions transit buses. However, no such federal program exists for the purchase of zero-emissions school buses. The Volkswagen Mitigation Trust offers Illinois the opportunity to take state-level action to jump-start the transition from polluting school buses to zero-emission electric school buses. Using VW Settlement funds to encourage investment in electric school buses would be a transformative step towards protecting the health of more than one million Illinois children in public K-12 schools who are transported daily via school bus.

Air Quality & Health Benefits:

Transitioning to a zero emissions future for Illinois’ pupil transportation will decrease air pollution and protect Illinois children’s health. Switching to electric school buses would reduce the lifetime NOx emissions from Illinois’ school bus fleet by more than 13 million pounds compared to an Illinois clean diesel school bus fleet and by approximately 11.9 million pounds compared to a propane school bus fleet. In actuality, the reductions will be even larger because the current Illinois school bus fleet contains nearly 2,000 highly polluting pre-2009 diesel buses.

School bus commutes in diesel buses account for about 1/3 of children’s exposure to black carbon despite only taking up about 10% of their day. Asthma is the most common chronic condition among children, and exposure to fossil fuel exhaust can both cause and exacerbate asthma. Special needs children who are the most vulnerable are also the most exposed to fossil fuel exhaust because the wheel chair lift on school buses is located in the rear of the bus next to the exhaust pipe. It is therefore critical for the health and safety of our schoolchildren for Illinois to transition to electric school buses, and the settlement presents the ideal opportunity to begin this transition.

Implementation:

As proposed in the draft plan, the $10.9 million carve-out for electric school buses in Illinois' Volkswagen Mitigation Plan would initiate the transition of Illinois’ school bus fleets to zero emissions. Illinois currently has 1,987 registered school buses built in 2009 or earlier; that represents 6.8% of the active school buses operating in Illinois. These older buses can and should be the targets for replacements with electric school buses. Through a successful demonstration project, Illinois school districts will gain exposure to and experience with electric school buses. While all of the old school buses in Illinois cannot be replaced with electric versions solely using VW money, the VW settlement provides an opportunity to demonstrate the effectiveness of these buses and begin building needed infrastructure to support new and future purchased buses. Once a school district has the infrastructure and the experience,

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4 Argonne National Laboratory’s 2017 GREET model (https://greet.es.anl.gov/).
8 IL School bus ages from Illinois Secretary of State Office.
it will be much easier for the district to add electric buses to their fleet over time. In addition, even schools that do not receive VW money for electric buses will be able to see and judge the experience in other districts. School administrators and school boards have associations and share information. We have heard from numerous school districts across the state which are greatly interested in accessing the electric school bus investments. This will give districts the confidence to adopt school board resolutions committing to target dates and goals for new school bus purchases to be electric. The Illinois Draft BMP requires a minimum cost share of 25% for government applicants and 50% for non-government applicants. Generally, we support the lower cost share for government applicants receiving VW grant funds, but in the specific case of school buses, the distinction is problematic. School bus ownership in Illinois varies locally; some school districts own bus fleets and others contract private bus companies. Often, districts that contract private transportation are those with the least financial resources. The health of Illinois schoolchildren should not be jeopardized based on school bus ownership. In accordance with the VW settlement terms and to ensure that children have equal access to clean and safe transportation, privately owned school bus companies under contract with a public school district and school districts should have equivalent cost matching for electric school bus funding.

Objectives: Depending on the final formula, we believe the VW Settlement could lead to the purchase of a significant number of electric school buses, which would:

1) Build state-wide electric school bus familiarity. The following school districts have already stepped forward expressing serious interest in obtaining electric school buses and represent different weather patterns, topographies, air quality conditions, and utility territories:

   - Chicago Public Schools
   - Frankfort School District 157-C
   - Prairiewood-Ogden District #197
   - River Trails School District 26Mokena 159
   - Vienna High School
   - Edinburg
   - Hoopston Area CUSD #11

2) Set the stage for Illinois school districts to begin the transition to a zero emissions future for pupil transportation by adopting school board resolutions that commit to target dates and percentage goals for new electric school buses. This will complement the $3 million electric school bus commitment already made in Ohio’s draft plan. By collaborating regionally, Midwest states could collectively seek a group buy discount for its schools. By combining electric school bus purchases and increasing the size of the purchase, states could reduce the cost and expedite the improvements of children’s health throughout the region.

3) Help Illinois meet its environmental goals. Electric school buses can uniquely support renewable integration with the electric grid. This is because the 100-mile range of electric school buses exceeds the daily mileage requirements of the average school bus route. This enables non-peak, night-time charging of the buses when wind resources are abundant. For schools with longer routes, solar-powered charging stations could provide the grid with supplemental power when buses sit idle during the school day. The acquisition of electric school buses not only decreases use of polluting fuels but could also make the electric grid

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more efficient and contribute to Illinois achieving or exceeding its Renewable Portfolio Standard.

4) Build student familiarity with electric vehicle technology. The National Energy Education Development Project could create STEM curriculum for Illinois schools focused on electric school buses.10

5) Acquaint residents across the state with electric vehicles as schools serve as learning centers for communities and by seeing the buses travel local routes or at regional sporting, musical and other extracurricular events.

6) Contribute to market transformation. All major domestic school bus manufacturers are developing electric models. With the availability of Volkswagen Mitigation Funding, now is the time for state leadership to help drive costs down. The Economist magazine developed an experience curve which demonstrates that costs typically decline by 20-30% when production is doubled.11 Blue Bird, the largest domestic school bus manufacturer, predicts that costs for its electric model could decline by 40% with larger quantity purchases.12 This is consistent with the decline in electric transit bus costs since 2010 when that technology was in a similarly nascent phase.13 As the price of electric school buses drops and as school districts see the savings associated with lower operating costs particularly from decreased fuel costs, more school districts will choose to buy cleaner, all-electric school buses.

Partners:

We have identified the following partners to collect and analyze critical data from the first deployment of electric school buses to inform future program design:

- Dr. Sara Adar from the University of Michigan14 is willing to test, record and analyze emissions data. This data could also be used to update a public health study she published in 2015 which concluded that using cleaner fuels in school transportation could prevent 14 million school day absences each year.15

Sara D. Adar, ScD
Associate Professor
Department of Epidemiology
1415 Washington Heights
Ann Arbor, MI 48109-2029
734-615-9207
sadar@umich.edu

• Kenneth Kelly, Team Leader of Commercial Vehicle Technologies at the National Renewable Energy Laboratory (NREL), is conducting an electric school bus evaluation and is willing to place NREL’s data loggers on buses to track vehicle performance, including operational and maintenance savings. This would inform the evaluation and contribute to NREL’s fleet DNA clearinghouse.

  Ken Kelly  
  Team Leader – Commercial Vehicle Technologies  
  Transportation and Hydrogen Systems Center  
  National Renewable Energy Laboratory  
  15013 Denver West Parkway, MS 1633  
  Golden, CO 80401  
  303-275-4465  
  kenneth.kelly@nrel.gov

• Regina McCormack, a former University of Delaware researcher, published a Cost-Benefit Analysis of a V2G-Capable Electric School Bus Compared to a Traditional Diesel School Bus in 2014 and is working on an updated cost-benefit analysis specific to midwestern school districts.

Resources on costs, technical specifications and other related information:

• Electric School Bus Models and Associated Charging Equipment Currently Available For Purchase - link  
• Draft RFP with Technical Specifications for Electric School Buses - link  
• Electric School Bus Charging Equipment Installation Guide - link  
• Electric School Bus Planning and Lessons Learned Webinar - link

Allocate the Maximum Allowed Amount for Light Duty ZEV infrastructure

Illinois should allocate the maximum amount allowed (15 percent, approximately $16 million) to deploy light duty electric vehicle charging stations. This investment is critical to eliminating barriers to electric vehicle deployment and will position Illinois to transform its transportation network and reduce transportation emissions. Light duty vehicles account for 60% of transportation greenhouse gas (GHG) emissions and ~37% of on-road NOx emissions. Transitioning to zero emissions light duty vehicles is a key tool for mitigating transportation air pollution. While other Midwest states such as Ohio, Michigan and Minnesota have dedicated the full 15% permissible allotment for light duty vehicle infrastructure, Illinois has committed nothing. The IEPA draft BMP appears to rely on Electrify America’s installations of EV charging stations to fill the demand for charging capacity. It is clear, though, that such reliance on the VW-sponsored Electrify America Program is misplaced; Electrify America has acknowledged that it

will only meet 10-15% of the supply-demand gap by 2020 in the few metropolitan areas where it is investing in EV infrastructure. 21

Electrify America will only fund projects in limited areas in the nation. For example, it will fund projects in the Chicago area but not in the Metro East region in southwest Illinois, adjacent to St. Louis. While Chicago will get some charging stations, most of the Electrify America DC fast charging hubs (DCFC) will be in the Chicago suburbs, and the Metro East will get no Electrify America funding. This is particularly problematic because the Metro East and Chicago Metropolitan Area are the state’s two ozone non-attainment areas. Acknowledging the limited scope of their initiative, Electrify America urges ongoing public and private investment in EV infrastructure. 22 To improve health outcomes and achieve significant emissions reductions, we recommend that Illinois take full advantage of the settlement opportunity to invest in charging infrastructure that will catalyze the transition to zero emission light duty vehicles.

The development of a robust, strategic charging station network is critical to the widespread adoption of EVs. 23 This is true for several reasons. First, there is a high up-front capital cost to an EV user to install a charger. Second, many potential EV owners neither own nor operate a parking space in which to install a charger. Third, the lack of a robust charging infrastructure on highways contributes to range anxiety. Fourth, the lack of visible, installed charging infrastructure results in lower public awareness of EVs and their potential.

Additionally, a dearth of this supporting infrastructure currently presents a barrier to a broader, more diverse Plug-in Electric Vehicle (PEV) market. 24 Using VW funds to build out charging infrastructure in appropriate locations can overcome these hurdles. For effective and just allocation of funds, we recommend that IEPA focus on investment in charging stations for key highway corridors, multifamily housing, workplaces, and communities historically disproportionately burdened by air pollution.

Highway corridors

The deployment of DC Fast Charging stations – which can refuel EVs much more quickly than 110 volt or 240 volt AC charging stations – are necessary to enable long distance EV travel and eliminate the “range anxiety” that would-be EV drivers may confront when embarking on long distance trips. 25 The map below was generated by the Environmental Law and Policy Center and displays the locations of

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25 While AC Level 2 charging is able to deliver 10-20 miles of range per hour of charging, DC fast charging can deliver 150-210 miles of range per hour of charging. See Alternative Fuels Data Center, “Developing Infrastructure to Charge Plug-In Electric Vehicles,” U.S. Department of Energy available at: http://www.afdc.energy.gov/fuels/electricity_infrastructure.html.
existing non-Tesla DC Fast Charging stations, current EPA non-attainment counties, and existing rest areas in the state that could be suitable for more comprehensive DC Fast Charging deployment.²⁶

While there are some Illinois DC Fast Charging stations in the Chicago and St. Louis metro areas, there is very little deployment elsewhere in the state and along highway corridors in rural areas that would enable EV drivers to complete longer trips. Would-be EV purchasers need to know they can drive from Chicago to Springfield, Des Moines, St. Louis, Carbondale, Champaign, Peoria, Quincy, the Quad Cities, Rockford, and other regional destinations, before making the decision to purchase an EV. To this end, Illinois should also coordinate with Volkswagen on Appendix C ZEV Investment Plan activities and surrounding states on their use of EMT funds to build out a more robust, complementary fast charging network.

**DC Fast Charging Stations in Illinois**

![DC Fast Charging Stations in Illinois](image)

Source: Environmental Law and Policy Center

**Multi-unit Dwellings**

IEPA should target a portion of funds towards EV charging infrastructure for multifamily housing. Research demonstrates that about 80% of EV charging occurs at home.²⁷ Therefore, access to overnight,

²⁶ See https://www.plugshare.com/ There is a focus on non-Tesla DC Fast Charging stations because Tesla employs proprietary charging technology that is only accessible to owners of Tesla vehicles. In order to assuage range anxiety and meaningfully accelerate the PEV market, access to fast and reliable highway corridor charging is a necessity for all PEV models.
residential charging is critical to support EV adoption. Unlike single-family homeowners, multifamily housing tenants face unique market barriers that may limit reliable access to overnight charging and ultimately impede the decision to purchase an EV. For this reason, targeting the multifamily housing segment can help spur EV adoption where it otherwise would not have occurred. 31.3% of housing units in Illinois are multifamily; approximately 70% of Chicago residents live in multi-unit dwellings.

**Workplace Charging**

Workplaces present another key opportunity for charging infrastructure deployment. Outside of the home, workplaces are where EVs sit for the longest period during the day. It has been demonstrated that employees of companies that have accessible charging stations are significantly more likely to purchase an EV than workers at locations without charging stations. The Department of Energy recently concluded that employees of companies who participated in its “Workplace Charging Challenge” were 20 times more likely to drive an EV than the average worker. Workplace charging can also increase the electric vehicle miles traveled (eVMT) and provide greater visibility for EVs generally.

**Overburdened Communities**

Low-income communities and communities of color in Illinois are disproportionately bearing the harmful health impacts of air pollution. A recent study by the Illinois Department of Public Health showed that 19% of Black children currently experience asthma, more than twice the statewide level of 9% for children. Additionally, the childhood asthma rate across Illinois is about 2/3 higher for individuals classified as poor/near poor compared to higher income individuals. This is directly related to exposure to air pollution, which exacerbates pre-existing asthma and can also lead to new-onset asthma.

In accordance with section 5.2.10 of the Settlement Agreement, when applying for funding the state is required to provide “A description of how the Eligible Mitigation Action mitigates the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions.”

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Given the clear disproportionate impact of air pollution on communities of color and low income communities, it is IEPA’s legal responsibility to specifically target these communities in mitigation efforts. One way for Illinois to accomplish this is to site EV charging infrastructure in non-attainment areas and in communities that have historically experienced this disproportionate burden. In the Draft BMP, IEPA listed “Areas that bear a disproportionate share of the air pollution burden, including environmental justice areas” as one of the priority areas for funding.\(^{35}\) This should remain a central consideration for just and effective distribution of all settlement funds.

**Utility Engagement**

IEPA should collaborate with electric utilities to pursue policies that increase grid efficiency, ensure necessary electric infrastructure is in place, and incentivize EV adoption. ComEd’s Hourly Pricing option for consumers in northern Illinois is an example of a program that benefits EV owners and utilities.\(^{36}\) The dynamic pricing on this plan incentivizes electricity use when grid demand is low, thus promoting off-peak charging and rewarding consumers with energy cost savings. A study on EV charging behavior by the Department of Energy demonstrated that a dynamic pricing regime, known as time-of-use pricing, is effective in shifting EV charging demand to off-peak hours.\(^{37}\) This model should be pursued across the state and also be considered on a district and commercial level to efficiently integrate EV charging into the Illinois electric grid.

**Conclusion**

The Environmental Law and Policy Center strongly supports the 10% carve out for electric school buses and recommends that IEPA utilize the full 15% for light duty ZEV charging infrastructure. Both of these funding areas are critical to reducing NOx emissions and ensuring an Illinois future with clean air and healthy schoolchildren and residents. We urge IEPA to allocate the full 15% for EV charging infrastructure, reducing the current 65% for off road vehicles. This would result in both a more balanced expenditure between on and off sources of NOx and make realistic the possibility of cleaner public transit buses from VW funds. We urge IEPA to prioritize both of Illinois’ non-attainment areas and communities disproportionately impacted by air pollution and collaborate with utilities to ensure the most effective and efficient use of funds.

Respectfully submitted,

Susan Mudd

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\(^{36}\) "ComEd’s Hourly Pricing Program." https://hourlypricing.comed.com/

As the Mayor of Chicago Ridge, I would like to register my negative opinion of the percentage distribution of the settlement that is going to the railroads. 70% is way out of line, especially considering only 20% is going to municipalities and school districts. As the owner of an electric vehicle, I am very much behind any movement that will help reduce the carbon footprint. We in local government, along with our colleagues in the education arena, would love to move from diesel vehicles to electric vehicles - dump trucks, municipal buses, vans, SUVs, pickup trucks and school buses. We want very much to eliminate tuneups, spark plug changes, gas prices, and especially the noxious pollution pouring into the atmosphere. The amount of dollars dedicated to that effort is paltry compared to what is being given to the railroads.

I strongly urge a reconsideration of the percentages being suggested for the distribution of funds. A 50% split between the municipalities/school buses and the railroads would be much fairer and have a more positive impact with our residents.

Thank you
Hello,

Please find MPC’s input on the draft BMP attached. Thank you for providing the opportunity to comment. Please reach out with questions or concerns.

Best regards,
Jeremy

Jeremy Glover
Transportation Associate | Metropolitan Planning Council

Don’t get mad about packed trains and potholes. Get active! Capture IL’s deteriorating transportation infrastructure on camera to help MPC advocate for sustainable funding. #BustedCommute
Illinois Environmental Planning Agency:

The Metropolitan Planning Council would like to thank the Illinois Environmental Protection Agency for the opportunity to review and provide input on the draft Beneficiary Mitigation Plan. Overall, the draft is a good starting point for further discussion. More information is needed to fully understand IEPA’s suggested approach.

The draft BMP plan states three overarching goals: 1) reducing NOx in areas where affected VW vehicles were registered, with a special emphasis on ozone nonattainment and EJ areas; 2) maximize emission reductions; and 3) maximize and leverage funding. The first goal defines the three priority areas that will be eligible to apply for funding. The criteria select only 18 of the 102 counties in Illinois to participate. However, these counties contain 85% of the affected vehicle registrations, 100% of the ozone nonattainment areas, and virtually all environmental justice block groups in the state. The methodology is transparent and appropriate.

The second and third stated goals of the BMP, maximizing emission reductions and maximally leveraging the funding, appear to inform the six selected eligible mitigation actions, the amount of funding dedicated to each, and the cost sharing requirements. MPC offers the following comments on the funding split.

- The plan should be clear that it aims to maximize emissions reduction in the near term. Prioritizing off-road vehicles like tugs and freight switchers will likely remove a larger volume of NOx emissions quickly. However, building out a comprehensive network of EV charging stations could potentially yield the same or greater gains over a longer period of time by encouraging the wider adoption of EVs. MPC shares similar concerns voiced by other organizations that relying on Part C funding alone may not move the needle in a significant way toward building a comprehensive network of vehicle charging stations. MPC believes a larger percent of the award should be dedicated to light duty electric charging infrastructure and other transformative long-term investments.

- The volume of NOx reduction will depend on the mix of projects submitted and selected. Therefore the expected emissions benefits should be expressed as a range, not as an absolute number.

- The BMP should also clearly indicate how emissions benefits were calculated. Currently, the plan only references the tools used, but a technical appendix is needed to understand IEPA’s methodology.

- The BMP implies that the amount of funding allocated across the six selected EMAs was done to maximize the amount of NOx reduction in the aggregate. Notably, off-road vehicles receive the greatest part of the funding because they offer the greatest reduction in NOx on a per-vehicle basis. However, it’s unclear if the current allocation matches the need of communities in the three priority areas. MPC would like to see an analysis of NOx emissions by source in EJ and ozone nonattainment areas. If health outcomes could be better improved by prioritizing on-road vehicles in high-risk communities, the plan should reflect this.
While MPC understands the need to fully leverage the mitigation funds, the 25% minimum cost sharing requirement for government applicants conflicts with the plan’s stated emphasis on EJ communities. The communities most impacted by air pollution may have the lowest capacity to apply and/or meet the funding match. Since little information has been provided on the application process, it is unclear if IEPA plans to offer a technical assistance program to help overcome some of these barriers.

The electric school bus program in particular should have different cost sharing requirements. To avoid penalizing school districts that use contractors to provide bussing service, private operators should also be eligible for the reduced government match.

A great deal of criticism has been levied at IEPA regarding the public outreach process for the BMP. MPC offers the following comments on public outreach.

- The absence of public meetings held before or after the release of the draft BMP is unusual, and unlike what many other states have done. Public meetings in EJ and ozone nonattainment areas would be helpful to understand which sources of NOx emissions are most harmful.
- The survey on the IEPA BMP website is a poor tool to collect public input for several reasons. Most significantly, it leads with a series of questions directed to potential applicants, even if the survey participant selects “no” for question three. This is confusing and likely causes a high dropout rate. Much of the remainder of the survey (from question 16 and onward) only allows you to select one preference when multiple may be appropriate.
- The State of Illinois has been lauded for its past outreach efforts when disbursing large awards. The Attorney General’s office received positive feedback for their handling of the National Foreclosure Settlement Awards in 2013. They set up a robust task force similar to that proposed by HB1025 and SB3101.

Once again, thank you for considering MPC’s input on this unique opportunity for the state of Illinois. Please feel free to contact Josh Ellis (jellis@metroplancouncil.org) or Audrey Wennink (awennink@metroplancouncil.org) with any questions or concerns.

Best regards,

Josh Ellis
Vice President

Audrey Wennink
Director of Transportation
Please see attached comments. Thank you for considering these. This is a resend of our comments as I am concerned an earlier email may not have gone through.

Regards,

Tom Mack
President/CTO

VeRail Technologies, Inc.

www.VeRail.com
VeRail Technologies appreciates the opportunity to comment on the State of Illinois' Draft Beneficiary Mitigation Plan for VW Settlement Funds. VeRail is a technology company, headquartered in Cincinnati, OH, that is developing near-zero-emission dedicated natural gas (CNG or LNG), straight battery, and natural gas/battery hybrid switcher locomotives (see addendum for additional information).

VeRail recognizes the importance of soliciting information and ideas on how the Settlement Funds should be spent. It is imperative that science-based information is the primary method for determining outcomes to assure that the Funds are spent prudently and provide the desired health-based results. VeRail agrees with the State's determination to use the Funds to support projects that maximize NOx emission reduction, especially in the non-attainment areas that bear a disproportionate share of the air pollution burden, including environmental justice areas. Such areas frequently are found along railroad right of ways that border underserved communities.

VeRail wishes to provide information and ideas on initiatives in Illinois that can provide the most cost-effective way to maximize NOx emission reductions. The Draft Beneficiary Mitigation Plan correctly identifies old freight switcher locomotives and passenger locomotives and their highly-polluting engines as a priority for replacement with the State's VW funds. We agree that the inclusion of switcher and passenger locomotive engine replacements in the Plan represent one of the most effective strategies available.

VeRail urges IEPA to become better acquainted with the newest and cleanest locomotive engine technologies and to closely examine railroads operating within the State of Illinois that can cost effectively utilize these technologies in their existing locomotive operations. At the same time, IEPA needs to resist the temptation to deploy the easier-but-less-effective strategy of upgrading old locomotives with "much cleaner diesel engines." While an upgrade of an old, dirty locomotive to Tier 4 off-road diesel engines provides significant NOx reductions, it does not represent the best available emission reduction strategy for locomotives. A much cleaner new "Tier 5" locomotive-engine technology, manufactured by VeRail Technologies, will soon be pilot tested in California and demonstrate a nearly ten-fold reduction in NOx emissions over the current off-road Tier 4 diesel locomotive engines.
IEPA should remember that the Tier 4 off-road standard still results in NOx emissions as high as 1.3 g/bhp-hr – which is higher than the 2007 Tier 4 interim on-road standard, and 6.5 times higher than the 2010 Tier 4 Final on-road diesel standard! While an upgrade of an old diesel locomotive to the Tier 4 standard may offer significant improvement over the status quo, NOx emission levels under this strategy will still be elevated and run counter to the goal of both protecting the health and achieving environmental equality for Illinois residents. Near-term emissions benefits can be achieved through this cleaner diesel strategy but they will be achieved at the cost of creating a barrier to longer-term emission improvements; investing in a Tier 4 locomotive strategy perpetuates this major source of high-NOx emissions for the lifetime of the engine upgrade – an engine that can remain in service for 30 years or longer.

Further exacerbating future locomotive emissions is the fact that many railyards are located in underserved communities. Since switcher locomotives will operate within the small confines of these yards for most of their operational lives, the emissions from locomotives are intensified compared to trucks that spend only a fraction of their time at a terminal. So not only can the emissions from a Tier 4 diesel locomotive be 10 times or more greater than the emissions from a Tier 4 truck, the effect to the communities surrounding the railyards can be the equivalent of hundreds of trucks operating in and out of the yard. Thus the cleanest available technology should be considered in order to minimize the detrimental effects on disadvantaged neighboring communities.

With investigation, IEPA will find that while the California natural gas and natural gas/battery hybrid engine projects referenced above are not yet commercially available, the cleaner technology is likely to become available within the timeframe of the proposed launch and duration of the Illinois Beneficiary Mitigation Plan. The Tier 5 compliant locomotive engines being developed by VeRail are already being dynamometer tested for EPA certification in the summer of 2018. The California straight battery and dedicated natural gas pilot projects (which add Zero-Emission Track Miles operation) are scheduled for completion in 2019. Its large potential impact in the near term is why this VeRail technology is receiving such considerable attention from other states and why the technology strategy is likely to be included in a number of soon-to-be-released VW state settlement plans.

VeRail supports the State of Illinois’ plan to request up to 65 percent of the Volkswagen Trust funds allocated for off-road or non-road projects. As the draft plan states, “Off-road or non-road projects, especially those involving locomotives, often result in the greatest amount of emission reductions and can be the most cost-effective projects.”

Consequently, VeRail strongly urges IEPA to include a sizeable freight switcher and passenger locomotive engine replacement program in the State’s Beneficiary Mitigation Plan. We recommend that IEPA closely monitor the technological improvements and commercialization inroads of these technologies and investigate where in the State these locomotives may be deployed.
With the State’s heavy industrial and agricultural base and sizeable population of short line railroads, there will be no shortage of freight switcher locomotives available to upgrade. According to one knowledgeable source, there are more than 250 freight switcher locomotives in Chicagoland alone. Some potential railroad operators include Chicago South Shore, Chicago Rail Link, Belt Railway of Chicago, Canadian Pacific, CSX Transportation, Norfolk Southern, Union Pacific, Canadian National, BNSF, and Watco. In addition to its passenger locomotives, Metra also operates eight switcher locomotives. In the East St. Louis non-attainment area, companies such as ADM, US Steel, Foster Townsend Rail Logistics, and the Terminal Railroad Association of St. Louis (with a huge hump yard in Venice, IL) operate upgrade-eligible freight switchers.

The inclusion of a freight switcher locomotive engine replacement plan along with the Metra passenger locomotive/DERA option upgrade will assure the greatest NOx reduction strategy of any single mobile source within the State.

VeRail urges IEPA to keep its technology deployment options flexible so it can utilize the cleanest technology options in each phase of its awards. Switcher and passenger locomotives that are updated today are likely to remain in service until 2050 and beyond. With the size of investment required and the length of a locomotives’ serviceable life, it is important to make the most cost-effective choices. Over the lifetime of these locomotives, trucks will no doubt continue to become cleaner, as low-NOx (0.02 g/bhp-hr) natural gas trucks, and zero-emission battery powered trucks replace today’s clean trucks. Thus the emissions gap between trucks and Tier 4 diesel locomotives will become even more egregious than it is today. Now is the time to narrow this gap for the future benefit of Illinois’ population, especially those who live near railyards.

VeRail also encourages IEPA to utilize one of the nation’s greatest scientific resources available to evaluate environmental impact of transportation strategies, Illinois’ own Argonne National Laboratory (ANL), located in Lemont, Illinois, to assess the strategies chosen to be included in the Illinois Beneficiary Mitigation Plan. The mitigation plan guidelines allow such administrative expenditures and IEPA should devote a portion of these funds to engage ANL for this purpose.

VeRail welcomes the opportunity to answer any questions from the IEPA staff about our innovative technology. We encourage the staff to tour a site where this technology has been deployed and to call the environmental program managers in other states who are responsible for the project management and for monitoring the emission results.

Tom Mack, President/CTO  
513-454-8192 Office Cell  
tmack@verail.com

1776 Mentor Avenue, Suite 350, Cincinnati, Ohio 45212-3583  www.verail.com
Addendum

Please refer to the attached PowerPoint slides for the comparative emissions analysis of a Tier 4 diesel switcher locomotive vs a Tier 5 VeRail CNG switcher locomotive as will be demonstrated in Southern California. A description of the program is described in this link: http://www.lbbizjournal.com/single-post/2017/01/30/Rail-At-Near-Zero-Emissions

**VeRail Technology Status:** Engines at dyno facility and ready for final calibration and emissions testing to meet proposed EPA Tier 5 locomotive emissions

Contacts for VeRail natural gas locomotive program at Ports of Los Angeles and Long Beach:

a. **Port of Long Beach:** Jacqueline Moore, Environmental Planning Division, jacqueline.moore@polb.com, (562) 283-7119

b. **Port of Los Angeles:** Jacob Goldberg, jgoldberg@portla.org, (310) 732-2675

c. **South Coast Air Quality Management District (SCAQMD):** Joseph Lopat, Air Quality Specialist, jlopat@aqmd.gov, (909) 396-2138

d. **VeRail Technologies:** Tom Mack, President, tmack@verail.com, (513) 454-8192 office, (513) 458-9192 cell
Tier 5 to Near-Zero to ZETM: Clean Technology Switcher Locomotives
EPA Switcher Locomotive Emissions – A Brief History

Good progress reducing emissions... but
Good progress reducing emissions… but we can do better!
Trucks are barely an emissions blip compared to Tier 4 diesel locomotives!!
Tier 4 locomotives (in gray) compared to Tier 4 trucks (light green) emit much higher emissions. Natural Gas locomotives (dark green) are not only cleaner, but available soon from VeRail Technologies.
VeRail Switcher Locomotive Emissions – The Future Now

- VeRail Locomotives are designed to meet 2025’s proposed Tier 5 Locomotive emission requirements today!
  - Diesel emissions can’t even compare with VeRail NOx reductions
  - Reduction of 99.5% below pre-Tier 0 and 92.3% below Tier 4 locomotives!
  - Tier 4 diesel locomotives can produce 13x the NOx of a VeRail locomotive!

**Switcher Locomotive NOx Limits (g/bhp-hr)**

Over 99% of the current U.S. switcher locomotive fleet are pre-Tier 0 to Tier 3 locomotives that produce 25x to 87x more NOx than a Tier 4 truck!

VeRail locomotives are designed to reduce NOx by almost 99.5% below Tier 0 and an astounding 92.3% below Tier 4!

A Tier 4 diesel switcher locomotive can produce 6.5x or more NOx per bhp-hr than a Tier 4 Truck. That’s not clean diesel!!!

Reminder: VeRail locomotives produce NO Diesel Particulate Matter!
GHG Emissions Reductions

- Greenhouse Gas (GHG) Reduction
  - California Low Carbon Fuel Standard (LCFS)
- CNG*
  - LCFS Reduction of ~22.7%* for Pipeline Gas
  - LCFS Reduction of ~81.3%* for Renewable Natural Gas (RNG)
    - RNG comes from landfills, dairy farms, wastewater plants, and other “renewable” feedstock sources
    - Because the carbon footprint for RNG is “recycled” and already accounted for, these sources totally replace non-renewable fuels and lower the GHG footprint dramatically

- CO₂ Reduction based on Pipeline Gas or Renewable NG

  30,000 diesel gallons per year locomotive
    - Pipeline Gas reduction of 76 tons per year per locomotive
    - Renewable NG reduction of 273 tons per year per locomotive

  50,000 diesel gallons per year locomotive
    - Pipeline Gas reduction of 127 tons per year per locomotive
    - Renewable NG reduction of 455 tons per year per locomotive

* LCFS Source: Carbon Intensity Lookup Table for Gasoline and Fuels that Substitute for Gas
Switcher Locomotives – Dirty to cleanest!

Metra 600 HP Pre-Tier 0 Switcher

Class I Railroad 1,500 HP Tier 0 Switcher

VeRail 600 HP to 1,200 HP
Tier 5 Natural Gas Switcher

VeRail 600 HP to 1,200 HP
Tier 5 Natural Gas Switcher

Reminder: VeRail “Tier 5” locomotives are virtually the same price as Tier 4 diesels!
VeRail Locomotives – Higher Horsepower Options

- Three Engine 1,800 HP “Road Switcher” Locomotives
- Available in 4-Axle VR18B3-nz and 6-Axle VR18C3-nz Configurations

Reminder: VeRail “Tier 5” locomotives are virtually the same price as Tier 4 diesels!
VeRail Locomotives – Higher Horsepower Options

- 6-Axle 2,100 HP Locomotives for the Most Demanding Switcher Locomotive Applications
- VeRail VR21C4-nz Locomotive
  - Heavy container train power in a single locomotive
- Zero-Emission Battery options available
www.VeRail.com

VeRail Technologies, Inc.

“Naturally Clean” Locomotives
Powerfully Designed

Questions?

Contact: Tom Mack
tmack@VeRail.com
(513) 454-8192
Dear EPA,

Please spend some of the settlement monies on public and workplace electric vehicle charging stations (EVSEs).

Wider support for EV and PHEV charging infrastructure will help increase their adoption and usage thus reducing climate change-causing emissions in Illinois.

Thank you,
Ted
The draft Volkswagen mitigation plan released for Illinois has some positive elements — it recognizes environmental justice concerns, and it commits 10% of funds to be invested in electric school bus programs, which is an important step to protecting children across our state.

But the only way to accelerate toward a clean vehicle future is for Illinois to choose zero emission vehicles — and we must be ready for them. In addition to prioritizing electric transportation, Illinois’ final mitigation plan should invest the max 15% of funds in charging infrastructure. Ohio, Michigan, and Minnesota have proposed dedicating the full 15% for EV infrastructure, so Illinois shouldn’t be left behind.

None of the funds should go to advance dirty engines that run on diesel and natural gas, the same fossil fuels that got us into this mess. Instead, plans should prioritize electrification through retrofitting or replacing polluting vehicles with clean, zero emission trucks, transit buses, locomotives and freight switchers, along with investing the full 15% for EV charging infrastructure.
Illinois EPA,

I am writing this to implore the Illinois EPA to include electric vehicle charging infrastructure in the draft BMP. Charging infrastructure is an important aspect of Illinois' green initiative. It gives the public convenient options to charge electric vehicles and incentives to buy electric and plug-in hybrids. Please include electric vehicle charging infrastructure in VW settlement plans.

Thank you,

Mike Padberg
Brad Frost and other EPA VW Settlement project staff:

I had the chance to hear about the VW Settlement by way of a little email discussion in Sierra Club circles this past year and more recently by Brad Frost's presentation to the IEPA Environmental Justice Commission teleconference call this past winter. Presently, I'm retired, dealing with eldercare for my mother the past 5.5 years, and I've done volunteer work for several southern Illinois environmental groups (including SAFE, SI Rights Project, Shawnee Hills and Hollers, Community Futures Initiative (reinvestill.org), and Shawnee Group Sierra Club). Prior to returning to my hometown in southern Illinois two decades ago for family reasons, I was a university professor, teaching and doing human health, nutrition and socioeconomic research in a conservation-development setting abroad. Upon returning to southern Illinois, I've worked health law and healthcare operations quality improvement related jobs. Because of this background, I am concerned about environmental health and environmental justice issues with respect to the fossil fuel industry in southern Illinois, where I hope to see our region transition to renewable energy soon for many health and socioeconomic reasons. I also actually own a manual VW Jetta with a turbo gasoline engine that seems to get 45-55 mpg on the highway (60 mpg going down a mountain highway) that I bought in St. Louis since that was the closest place that a manual transmission VW economy car could be bought.

While I understand your focus on high diesel VW owner areas in high population areas of Illinois (Chicago, Metro East), which apparently overlap with high emissions locations because of the increased population density all driving, it's too bad that areas already benefiting from corporate "responsibility" foundation money and such (in urban areas predominantly) are further dividing high- and low-income areas of our state. From talking with Brad Frost, Chris Pressnell and Crystal, it's unclear whether this imbalance can be rectified within the scope of the VW settlement itself. However, as discussed in the Collinsville public hearing last week, I hope that the EPA and Illinois will consider additional projects or attention to southern Illinois that would attempt to rectify environmental justice situations and the transition from fossil fuel to renewable energy. Our Springfield and Washington government representatives seem stuck on fossil fuel money, along with the current Oval Office occupants, so many voices in southern Illinois who hope to see the Clean Power Plan, Paris Agreement, and renewable energy transition happen are not always heard in Springfield or Washington, DC. Given Illinois cannot timely reimburse the Medicaid or State employee health insurance to healthcare services aiding our environmental health impacted residents, or Congress cannot support healthcare, admit to Climate Change, and salvage the EPA and Dept. of Interior protections for our health, this is a travesty. During earlier parts of my life, I've worked out on the Navajo reservation where Peabody has strip mined coal for a half-century, and in the 3rd World African French colonial nation of Madagascar, and it's disturbing to me that my hometown region of southern Illinois is a similarly peripheralized fossil fuel "sacrifice zone" in juxtaposition to other regions of our state and nation, and to other classes of wealthy people in our nation. Thus, I cannot but help to speak out for my region. After realizing that many intelligent people do not necessarily need outsiders' projects in 3rd World nations or Native American reservations (with which our local groups still network nevertheless), one focuses on one's own backyard and neighbors.

I would like to point out that a few groups in southern Illinois have been and/or are working on residential/business solar bulk buys, community solar, public busses, school busses, solar array parking/charging areas, and a hydrogen-powered commuter light rail train system that would link existing Metro East commuter rail (Scott Air Force Base to St. Louis Lambert Field) to a Murphysboro, Carbondale, Marion, Harrisburg, Mt. Vernon sort of loop (and extensions) using existing railroad beds. Some of the local solar installers also teach solar installation classes at the local community colleges, which is open to former fossil fuel industry workers to help transition them to alternative jobs. Because of these examples, this was the reason why I asked Brad Frost during the IEPA EJ teleconference call meeting about whether the Metro East VW projects could possibly consider the hydrogen commuter train combined with electric vehicle charging stations in the parking lots near
the hydrogen commuter train stations around its Metro East and southern Illinois loop. It would partly address emissions issues in Metro East, but it would also extend economic benefit and renewable energy transition benefits to low-income rural southern Illinois that has been impacted by the fossil fuel extraction industry. Carbondale has an EJ zone, and the region has many other low-income people as I know from having written the needs assessment parts of healthcare service grants for our region's medically underserved counties. Again, if the VW settlement will not entertain projects in the low-income rural southern Illinois fossil fuel impacted region, I hope that other state and IEPA initiatives will (including remediation of fossil fuel impacted land, air and water).

In reading the VW settlement scope, I don't take total issue at also upgrading barge, airport, train and school bus transportation in Chicago or Metro East, so as to lower emissions. Southern Illinois does have the barge traffic along the Mississippi and Ohio Rivers, and we are a crossroad of the nation not just for waterways, but railroad tracks, highways and air. By the way, add 157 to your interstate highway list for electric vehicle charging stations. I just hope our state can begin to rectify the Chicago-downstate and Metro East-other political-economic divisions.

Let me know if you would like further discussion with people in any or an assortment of our local community groups.

Thank you for considering my comments.

Sincerely,

Sabrina Hardenbergh, Ph. D.
Dear Illinois Environmental Protection Agency,

There is no higher priority for the Illinois Environmental Protection Agency that protecting public health and ensuring the quality of our air. According to the National Air Quality Standards (NAAQS), air quality in certain regions in Illinois including the metropolitan Chicago area and the Metro-East St. Louis area are considered Illinois Ozone Nonattainment areas. According to the Illinois Environmental Protection Agency’s VW settlement website, almost 75 percent of nitrogen oxide emissions in Illinois are derived from mobile sources which solidifies the importance of focusing on reducing emissions in this sector. According to the American Lung Association, analysts estimate that there are public health and climate change costs of $1.15 for each gallon of gas consumed clearly demonstrating the need to encourage adoption of electric vehicles across various sectors. Vehicle electrification is expected to disrupt the transportation market in a number of ways including leading the way toward tremendous transportation-related emissions reductions, playing a more important role in balancing and stabilizing the grid, and helping to advance the integration of renewable energy sources.

Not only can the VW settlement jump start the electric vehicle market in Illinois and amplify emissions reductions, these emissions reductions can be targeted to make the greatest impacts within the NAAQS nonattainment areas maximizing results for improving public health. One such program is the Electric School Bus program proposed by … which can have a positive impact on some of the most vulnerable individuals -- children riding these buses. With more than one million Illinois students riding school buses, this program addresses a critical component to jump starting a vital public health initiative with a transition to zero emissions buses.

Representing a diversity of expertise from both public and private sectors -- a public research university, a national laboratory, and private industry -- and leading a charge to educate and inform future thought leaders on sustainable mobility at the University of Illinois at Chicago, we utilize a cross-sector and interdisciplinary approach to understand the holistic impacts of different sustainable mobility options, including electric vehicle and electric school bus adoption. We are in full support for the Draft VW settlement Beneficiary Mitigation Plan (BMP) which prioritizes areas where the greatest number of vehicles were located, and the greatest air quality impacts will be achieved. More specifically, we support the portions of the plan focused on electric vehicles in both the On-Road Projects and the All-Electric School Bus Projects sections. We recommend increasing or at the minimum, maintaining the funding levels within the Draft BMP as these funds will drive a transition to a cleaner mobility system maximizing the benefits to society and the residents of Illinois.

Sincerely,

George Crabtree PhD
Director of the Joint Center for Energy Storage Research, Argonne National Laboratory

Elizabeth A. Kocs, PhD, MBA
Director, P.O.R.E., University of Illinois at Chicago Energy Initiative

Bryan Tillman, MS, MBA
Project Manager, 360 Energy Group
Please see attached comments of Greenlots on the draft Beneficiary Mitigation Plan.

Thanks,
Tom

Thomas Ashley
VP, Policy
Greenlots

greenlots.com
April 20, 2018

Brad Frost  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Springfield, Illinois 62794  

RE: Beneficiary Mitigation Plan

Dear Brad,

Greenlots appreciates the opportunity to provide the Illinois Environmental Protection Agency (EPA) with comments on the State’s Beneficiary Mitigation Plan (BMP) and provides the following recommendations for funds disbursement.

Greenlots is a leading provider of electric vehicle (EV) charging software and services. The Greenlots network supports a significant percentage of the DC fast charging infrastructure in North America. Greenlots’ smart charging solutions are built around an open standards-based focus on future-proofing while helping site hosts, utilities, and grid operators manage dynamic EV charging loads and respond to local and system conditions.

Greenlots strongly urges the EPA to allocate a specific carve-out for light-duty EV charging within the BMP, and maximize this funding at the 15% allowable under the Trust. The State’s rationale for not dedicating funds to light-duty EV charging is unfortunately misguided. The investment in charging made by Electrify America within Chicago and the rest of the State will be important, but will only represent an initial foundation for statewide EV charging. The Electrify America investment is targeted in specific areas (the Chicago metro area and highway corridors), and therefore a light-duty EV charging carveout can help ensure the infrastructure build-out is robust across the state.

Furthermore, the proposed EV charging opportunities under the various Eligible Mitigation Actions (EMAs) do not match the needs of Illinois residents. The use cases of EV charging for public light-duty EV charging is significantly different than that for Class 8, 4-8, and 4-7 trucks or buses. The charging infrastructure needed by fleet managers, transit agencies, or the like is appropriate for that specific use case—but not for public EV drivers; the charging infrastructure is most often inaccessible, needs to be prioritized for use by the electric truck or bus, is not located in convenient locations for everyday driving, and lacks the amenities necessary for a positive EV driving experience.

A specific carve-out can actually amplify and compound the benefits realized by “Illinois’ goal to reduce and maximize NOx reductions, and ensure against stranded EVs or infrastructure” (page 14). The deployment of public charging stations can help indirectly incentivize the purchase and
use of other EVs. From a NOx reduction standpoint, light-duty vehicles are the most effective emissions segment to address with Environmental Mitigation Trust funds in terms of dollars spent per pound of NOx emission reductions. The 15% light-duty EV charging investment represents a critical step toward enabling long-term emissions reductions of NOx and greenhouse gases.

Greenlots recommends that the EPA consider investing in DC fast charging along highway corridors to facilitate long-distance travel, to meet the needs of EV drivers who need to charge on the go, rather than where the car is parked for more than an hour or two. Level 2 charging will be important for locations with long-dwell times, such as at destination locations, workplaces or apartment buildings.

We are supportive of the state's 10% investment in all-electric school buses. This allocation provides substantial health co-benefits for the state's most vulnerable populations and has potential for long-term cost savings due to reduced maintenance costs and lower fuel costs. In addition to investing in light-duty charging infrastructure, Greenlots encourages the EPA to devote the remaining Mitigation Trust funds toward electrification of the heavy-duty sector, particularly transit buses. Some of the many benefits of heavy-duty transportation electrification include: reduced operating costs from fuel and maintenance; increased vehicle longevity resulting from the electric motor; reduction of criteria air pollutants; health benefits for workers, passengers/schoolchildren, and community members; and reduction of greenhouse gases.\(^1\) By investing in transit and school bus electrification, Illinois would be providing direct benefits to populations that may not directly benefit from home EV charging; heavy-duty charging provides both direct and indirect public health and social welfare benefits for transportation users and many surrounding communities—many of which tend to bear a disproportionate share of pollution (e.g., NOx, SOx, PM).

It will be important for EPA to outline a transformative strategy in the Beneficiary Mitigation Plan that leads to long-term emissions reductions and benefits for environmental justice communities—this objective can only be achieved with wide-scale transportation electrification. EPA should use a comprehensive approach to calculating cost effectiveness, that incorporates reduced fuel and maintenance costs from the electric engine, public health benefits, and emissions reductions benefits, over the lifetime of the vehicles and infrastructure.

Thank you for your consideration. Greenlots will be available as a resource to EPA through the finalization and implementation of the Beneficiary Mitigation Plan. Please do not hesitate to contact me should you have any questions.

---

\(^1\) Edison Electric Institute. 2014.  
Sincerely,

[Signature]

Thomas Ashley
Vice President, Policy
Thank you for your consideration of the attached comments.
April 20, 2018

Brad Frost
Illinois EPA
1021 N Grand Ave East
Springfield, IL 62794

Dear Mr. Frost:

The Chicago Area Clean Cities Coalition (CACC) is thankful for the opportunity to submit comments in response to the Illinois Environmental Protection Agencies’ (IEPA) draft Beneficiary Mitigation Plan (BMP). The BMP establishes the goals and guides how the IEPA will invest Illinois’ $108 million Volkswagen Environmental Mitigation Trust Fund (Trust). Throughout our 20-plus year history, CACC has helped alter the local clean transportation landscape by reducing petroleum use by over 175 million gasoline gallon equivalents, deployed over 23,000 alternative fuel and hybrid vehicles, 220 alternative fuel stations and over 300 electric vehicle charging stations in the Chicago area.

Clean Cities is a US Department of Energy (DOE) program whose mission is to reduce petroleum use from the US transportation sector. Clean Cities coalitions are comprised of businesses, fuel providers, vehicle fleets, state and local government agencies, and community organizations. Since receiving official Clean Cities Coalition designation from DOE in 1994, CACC stakeholders have collaborated to meet a challenging environment to transform transportation in the six-county region that includes, Cook, DuPage, Kane, Lake, McHenry and Will counties.

CACC’s success is due to:

- Building partnerships with local public- and private-sector transportation stakeholders
- Developing unbiased and objective information resources about alternative fuels, advanced vehicles, and other strategies to cut petroleum use
- Advancing interactive, data-driven online tools to help stakeholders evaluate options and achieve goals
- Collecting and sharing best practices, data, and lessons learned to inform choices and support a strong national network
- Providing technical assistance to help fleets deploy alternative fuels, advanced vehicles, and idle-reduction measures
- Working with industry partners and fleets to identify and address technology barriers
- Empowering local decision makers to successfully implement the best petroleum reduction strategy for their circumstance
• Seeding local alternative fuels markets through projects that deploy vehicles and fueling infrastructure.

IEPA has an opportunity to accelerate the purchase of cleaner, more efficient trucks, buses and non-road equipment at historic scale in Illinois. IEPA can leverage the Trust as an investment tool that will have a lasting impact on the clean vehicle market and alternative fueling networks. Investing in advanced vehicle technologies will lead to new innovations, new jobs and new products.

CACC believes IEPA can maximize emissions reduction and drive technological change by increasing the cost share required for all projects and further increasing the cost share required for diesel vehicles and equipment purchased through the Trust. IEPA’s current proposed cost share for both government and non-government applicants is too generous. The IEPA can increase the cost share requirement and still have adequate applications. Most clean vehicle funding programs across the US help reduce the incremental cost of alternative fuel vehicles (AFV) and hybrids but do not fund the base cost of the replacement vehicle. Additionally, USEPA’s DERA program has been successful with much higher cost share requirements for clean diesel replacement projects. By increasing the cost share requirement, IEPA can fund more vehicle replacements and greatly improve the emissions reductions of the program.

The Trust can help IEPA build a legacy of clean vehicles for Illinois similar to how American Recovery and Reinvestment Act funding helped CACC significantly grow the alternative fuel market in the Chicago area beyond the initial federal funding investment. The Clean Fuels Across Chicago program deployed over 400 AFVs and over 225 alternative fueling stations with $15 million in federal funding. Clean Fuels Across Chicago helped reduce the incremental cost of hybrid and AFVs and provided funding support for alternative fuel refueling infrastructure. The program enabled many local fleets to try out clean vehicle technologies for the first time. These investments resulted in the deployment of hundreds more vehicles and stations because of this initial, regional effort.

On-road projects provide more opportunities to demonstrate advanced clean transportation technologies versus non-road projects. Clean, alternative fuels such as electrify, propane and natural gas can power commercially available medium- and heavy-duty vehicles. Projects that replace old diesel vehicles and equipment with alternative fuels should receive more Trust funding than those that replace old diesel with another diesel engine. AFVs and hybrids should receive additional funding consideration since the adoption of these technologies is important to numerous sustainability goals throughout Illinois. Since most NOx emissions in Cook County come from on-road diesel vehicles and on-road projects have more potential to utilize AFVs and hybrids, IEPA should increase the Trust allocation for on-road projects.

CACC encourages IEPA to invest in a network of state-wide, light-duty electric vehicle charging stations, especially along key transportation routes. An electrified transportation system can reduce greenhouse gas and other pollutants, invest in domestic fuel sources, and reduce vehicle operating and fueling costs. Access to easy charging in Illinois can expand and accelerate the EV market and support the

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1 http://chicagocleancities.org/images/CACC_PlantingTheSeed_RV5_FINAL.pdf
10,000+ existing EV drivers who reside in 99% of Illinois’ counties. IEPA’s draft BMP distributes Trust funding to only three areas of the state. If IEPA allows for charging station projects, all communities throughout the state can benefit from the Trust. IEPA’s investment in charging stations is necessary. Electrify America’s investment in Illinois will only address 10-15% of the charging gap that will exist by 2020².

Section 1413 of the Fixing America’s Surface Transportation Act (FAST Act) calls on USDOT to designate zero-emission and alternative fuel corridors to ensure our nation’s transportation system meets the modern and future needs of fleets and drivers. In response to USDOT’s request for corridor nominations, IDOT and DCEO acted with key partners to request designations of several interstates within Illinois. DC Fast Chargers installed cost between $30,000 and $60,000 per unit³. IEPA can leverage the mitigation trust to invest in DC Fast Charging infrastructure to electrify every major interstate. Additional DC Fast Charging is also necessary in metropolitan areas to support the growing number of electrified high-utilization fleets such as livery, Transportation Network Providers, and delivery vehicles.

As our final comment, CACC advises IEPA to develop a transparent, streamlined application and award process for the Trust. Clearly defined expectations for the IEPA and applicants will increase the changes for successful, timely projects. Selected applicants should be allowed to utilize existing contracts and those whose purchasing policies require new contracts via a public bidding process should be granted ample time to complete their projects. A timely application review and award process is crucial.

Please contact me at jwalton@advancefuelling.com if the coalition can be of assistance.

Sincerely,

John W. Walton
Chairperson

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² https://www.electrifyamerica.com

Our suggestion is that oversite of the plan, spending, and distribution of funds be conducted by taxpayer-based consumer and industry officials that have practical experience on alternative fuel systems. The current plan has been developed by career bureaucrats and lobbyists that are not best suited for efficient spending of large capital projects. This Illinois Alternative Fuel Alliance is an organization that is made up of a cross section of industry, consensus groups, and alternative fuel experts that is best suited to ensure taxpayer-based oversite of program development and of IEPA’s execution of funding.

A primary example of the currently plan’s deficiencies is that that the draft plan was drawn up by IEPA focusing on locomotives, tug boats, off road vehicles, and electric busses, while in non-attainment areas the greatest sources of pollutants come from on road traffic. Had there been oversite by tax payers, there would have been greater inclusion of alternative fuel options that are currently viable and in use around the country.

A quick review of NOx elimination programs around the country that also have the added benefits of reduced fuel cost, US developed fuel supply and reduced maintenance cost (that are specifically not adopted under the bureaucratic developed Illinois draft plan) are as follows:
• New York’s Metropolitan Transportation Authority Bus Company, the largest bus fleet in North America and the New York City Transit have contracted with Trillium CNG to install additional CNG fueling infrastructure.

• Dallas Area Rapid Transit (DART) adding 82 CNG buses to bring its CNG fleet to over 600 CNG buses. This program will reduce current NOx emissions by 90% when compared to their conventional diesel-powered vehicles.

• San Diego MTS has added 50 more New Flyer buses.

• Flyer CNG buses, bringing their total CNG bus fleet to over 350 vehicles.

• Phoenix has ordered up to 396 New Flyer CNG buses.

• The Boston Public School system operates 247 Propane buses, which represents 40% of their fleet. This is part of Boston’s fleet emission reduction program. School buses make up 10% of Boston’s vehicle emissions.

• LA Metro has ordered 300 New Flyer CNG buses.

• USA Today has published that a Propane Full Sized school bus costs about $100,000, about $4,000 more than a diesel bus (where electric school buses currently cost 2 to 4 times the cost of a propane bus).

Had tax-payer representation been involved in the oversite of the Illinois plan development, a market study of companies like New Flyer Group and Roush Cleantech and Blue Bird, would have been included to confirm the vehicle infrastructure of the most viable emission reduction options currently available and under serious development, that should have been included.

A further concern is the IEPA currently has oversite of CMAQ funding for alternative fuel grants and have been unable to process grant applications since August of 2017. After much inquiry with the help of our State Congressional Representatives some recent activity has been made by the
IEPA, but that activity has not resulted in any reduction of nitrogen oxides (NOx) emissions from mobile sources (because nothing has progressed). Certainly, the inability of the IEPA to process routine grant applications should give pause to allowing the organization to manage a fund of $109 million without oversite.

Sincerely,

David Hagopian, VP Operations
Ron Sheble, VP Finance

Advanced Vehicle Technology Services, Inc.
Advanced VTech
4900 US 141 S
Brookfield, IL 60513
773-777-5000
info@AdvancedVTech.com

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From: Sierra Foster
Sent: Tuesday, April 24, 2018 9:31 AM
To: EPA.VWSettlement
Subject: [External] Fwd: Message from KM_C558
Attachments: SKM_C55818042409201.pdf

Franklin CUSD # 1-
------------- Forwarded message -------------
From: [红acted]
Date: 2018-04-24 10:21 GMT-05:00
Subject: Message from KM_C558
To: [红acted]
Submitted via email to pcrush@franklin210.org

April 24, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionally burdened by these vehicles. As the District Superintendent for Franklin CUSD # 1, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 306 of students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport 221 of students per day. Our buses range in age from 2010-2017 with an average fleet age of 8. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

**Recommended Changes to the Draft Beneficiary Mitigation Plan**

In order to increase the cost-effectiveness of projects and stretch the state's dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.
Our district has been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet and would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student's exposure to emissions such as NOx and others that are associated with pre-2007 diesel buses, including increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.1

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest – and dirtiest – school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

Andrew Stremlau
District Superintendent
Franklin CUSD # 1

---

Kent E. Mohr Jr., Esq.
Manager, Mobile Source Program
Illinois Environmental Protection Agency
1412 East Grand Avenue, Suite 2270
Chicago, IL 60615
217-782-3792, Fax: 217-782-3794
kmohr@illinois.gov

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-----Original Message-----
From: Kent E. Mohr Jr., Esq.
Sent: Wednesday, April 25, 2018 2:20 PM
To: Mohr, Kent
Subject: Scanned from a Xerox Multifunction Printer

Please open the attached document. It was scanned and sent to you using a Xerox Multifunction Printer.

Attachment File Type: pdf, Multi-Page

Multifunction Printer Location: 1021 North Grand Avenue E - Bld North (E4)/Flr 4 Main Rm East Wall Cube 7
Device Name: P532A2M630933

For more information on Xerox products and solutions, please visit http://www.xerox.com
Submitted via email to epa.vwsettlement@illinois.gov

April 18, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smog-forming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Superintendent for Edinburg CUSD #4, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 300 students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport over 100 students per day. Our buses range in age from [2011 – 2015] with an average fleet age of 5 years. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

**Recommended Changes to the Draft Beneficiary Mitigation Plan**

In order to increase the cost-effectiveness of projects and stretch the state's dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.

Our district operates 3 propane school buses and we have been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet. We would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student’s exposure to emissions such as NOx, including...
increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest — and dirtiest — school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

Fredrick A. Lamkey
Superintendent
Edinburg CUSD #4
flamkey@ecusd4.com

---


Brad:

We are interested in looking into the purchase of electric school buses. However, we've already made purchases for the 2018-19 school year. Do you have any idea if funds will still be available for purchases made in 2019? If so, how can we progress with the process?

Thanks,

Keith Johnson
Director of Transportation

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From: Mike Erickson  
Sent: Wednesday, May 02, 2018 7:05 AM  
To: Frost, Brad; Elizabeth Schuh; Kyle Whitehead; Southtown Economist  
Subject: [External] VW Settlement and ECHs  

Dear Officials,
Please consider the enclosed commentary on the subject at hand.
Brad Frost Illinois EPA  

Dear Environmental/Transportation Official:

Hold public meetings. Do not let Caterpillar dictate Illinois’ plan to spend the Illinois’ VW settlement. They may be well intentioned, but they are wrong.

Rebuilding, retrofitting and/or replacing 40+ year old Metra diesel locomotives does little but insure that diesel pollution, including CO2, will plague our region essentially forever.

Read the following...“Feb 21, 2018 - Metra directors Wednesday authorized executives to negotiate buying up to 21 locomotives costing $1.3 million each that were most recently used by Amtrak in California and elsewhere on the West Coast”, said the Daily Herald. The $27 million spent here would resolve their issues until a better plan can be developed.

If you insist on helping Metra riders, then build a new All-Electric Metra. Start by extending Metra Electric service to O’Hare Airport. See the Cross Rail Chicago plan by the Midwest High Speed Rail Association. Then electrify all the Metra owned lines. Continue with the Metra lines that carry the least rail freight traffic and move up the chain.

If you want to maximize your impact on the reduction of auto-related air pollution, including CO2, then take $10 million of the VW settlement and create a plan, then build, the first 15 miles of an elevated bicycle highway system for the region. Put a completely fun and safe facility for bikes alongside a congested freeway and watch the region respond. Bicycle highways, like the 606-Bloomingdale Trail, are a game changer.

The potential to reduce auto-pollution and congestion is so much greater with an elevated bicycle highway. Chicago’s bicycle mode share for bikes is less than 2%. Portland’s mode share for bikes is over 7%. Given the logarithmic nature of highway traffic congestion a 5% reduction in cars on the highway could be worth billions in benefits, many times the costs.

Hold public meetings. Caterpillar’s plan would set Metra back 40 years. Move forward not backward by allowing meaningful public participation in the process of deciding how best to spend the VW settlement. Plan and build elevated bicycle highways like the rest of the world is doing, and reap the benefits!
Sincerely,

Mike Erickson
Adjunct Professor
Earth and Environmental Sciences
Moraine Valley Community College

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The Hydrogen Association’s world symbol depicts the classical hydrogen proton with an endlessly orbiting electron as the energy carrier for cleanly and healthfully achieving sustainable prosperity in every community on Earth.

May 7, 2018

Greetings,

Every year we release 36 billion tons of carbon into the atmosphere and that has accumulated to 36 gigatons of carbon. That’s too much carbon!

The Hydrogen Association completely recommends developing a new fuel that would stop releasing carbon into the atmosphere! Net-Liquid Hydrogen

Here’s our comments:

A unique opportunity has been presented to the United States of America through the 2.7 Billion Remediation VW Settlement to improve the quality of the air. With this VW Settlement fund each state could work together to create sustainable economic development with Hydrogen and Carbon-reinforced equipment. By driving with net-hydrogen liquid fuel we can convert cars to become “vacuum cleaners” to clean up the existing air pollution in our cities. Instead of burning the carbon in gasoline, diesel and jet fuel, we can use carbon to produce many more jobs profitably making durable goods. Please watch the following video for an overview: http://youtu.be/qOL2ffEzeuye. If the link does not work, please go to YouTube and look up Metrol by David Vasquez. It’s important and it does matter! The video explains everything.

By converting to net hydrogen liquid fuel, called Metrol, we will cleanly energize our current infrastructure and companies, by creating new jobs that will coexist with our current jobs.
Nobody needs to go out of business and we will create new jobs! The US can lead the world to ultimately convert the current 1.3 billion engines in transportation, electricity generation, farming and mining applications to overcome local pollution and reverse global warming.

The United States truly has been given the VW Settlement funding to make this happen, but each state needs to help expand the economy and overcome pollution of the air, water, and soil. **What I am asking for today is that we put our differences aside and come together to help our planet and provide a better future for generations to come.**

Please ask your economic development consultant to contact us. We would like to have business partners in Illinois ready to produce Metrol and the smart plugs when the funds are assigned.

For more information, please call Roy McAlister, the founder of the Hydrogen Association. The phone number is 602-931-2867.

Or you can email Roy at remcalister@gmail.com. For more information and the white paper on Metrol, please visit Metrol-hydrogen-fuel.com.

We look forward to submitting a proposal. Yes, it's going to take effort, time, and money, but it's worth it!!

Every day that goes by more carbon is being added to the atmosphere that could be used to make something profitable.

Thank you for your consideration,

Sara Enochs

**Here are some additional thoughts to consider:**

We call Metrol Liquid Fuel, Hydrogen 2.0, because it fixes a lot of the earlier issues. With Metrol, we can use existing fueling pumps, it can be transported like regular fuel, we don’t have to add additional storage tanks to the vehicle, it works with all engines including fuel cells, and the best part, we won’t put anyone out of business; we can use existing companies to produce Metrol and the smart plugs.
NJPA Awarded Contract

NJPA National Vehicle Contracts #120716-NAF & 081716-NAF

National Auto Fleet Group
A Division of Chevrolet of Watsonville

An industry leading network with 50 years experience providing fleet vehicle needs for public entities. Our contract will allow you to work and purchase vehicles at your own pace, therefore eliminating the time consuming bidding process.

Visit Website

- Visit our website to register your public agency.
- Build your vehicle online, call, or email to receive a NJPA contract quote.
- Email us your vehicle specs to receive a quote.
- Freedom to build multiple quotes with no obligation to purchase.
- Online access to view all options available.
- Contracts offer local up-fittings with related equipment.
- Access to website 24 hours a day.
2019

Models Now Available!

Don't hesitate, contact us today!

Call: 855-289-6572
Fax: 831-480-8497
Email: Fleet@nationalautofleetgroup.com

This email is intended for epa.vwsettlement@illinois.gov.
Update your preferences or Unsubscribe
Dear Illinois EPA,

Thank you for the opportunity to provide public comment concerning the Volkswagen settlement funds allocated to Illinois. First, I ask that the Agency take time to involve all stakeholders and expand outreach to maximize public engagement and participation in how to invest these funds. Other states, including several Midwestern states, have fostered lengthy public stakeholder processes that in some cases began well over a year ago. Illinois is only providing six weeks for interested members of the public to weigh in on a document that was created behind closed doors by unknown parties. IEPA should have held public hearings months ago to foster development of a such a document. But given it chose not to do so, going forward it should at least hold multiple public hearings and provide additional time for the public to comment on the draft it produced without public input.

Illinois should take the opportunity to carve out the maximum allowable 15 percent of the Volkswagen funding specifically for expanding publicly accessible light duty vehicle electric charging infrastructure. By 2019, over a million electric vehicles will likely be on the nation’s roadways. Illinois needs to be able to capture the accelerating health and environmental benefits of this transition, especially as it is occurring in parallel with massive investments in clean solar- and wind-generated electricity driven by the Illinois Future Energy Job Act. Electrifying the transportation sector in Illinois should be a top priority towards eliminating transportation emissions and increasing the long term health benefits that follow. As more and more electricity in Illinois comes from zero emission sources, electric vehicles in Illinois will only get cleaner with every year going forward, both in terms of dangerous smog and soot pollution as well as in terms of greenhouse gases driving catastrophic climate change; Smog, soot and extreme climate change are all significant threats to public health, especially for people living with lung disease.

I am heartened to see electric school buses receiving 10 percent of the funding as school children and the communities in which they live will reap the benefits of zero emission vehicles. This should be at least double this percentage, with provisions to provide additional assistance to low income and environmental justice communities. As of now, it appears that Agency has placed communities where school districts contract bus service at a disadvantage; public school districts that own buses will only have to match 25 percent of the cost of an electric school bus, but districts that rely on contracting with private firms to provide school bus transportation, including the largest school district in the state, face a much higher 50 percent matching fund requirement. This is antithetical to helping at-risk environmental justice communities, even though the Agency lists this as one of its concerns.

The Agency should also carve out a significant set aside specifically for electric public transit buses, at least on par with expanded support for electric school buses. Transit buses operate in the most densely populated areas and can travel hundreds of thousands of miles a year in these communities. Electrifying bus transit will reduce local pollution and improve the health of transit patrons and employees, as well as the millions of people living close to transit routes, while nearly eliminating greenhouse gases that threaten the entire state.

Thank you,

Miss. Michele Reyes
Hello,

I wanted to see if this money could potentially assist our school district with upgrading or leasing multifunction school buses.

Thank you in advance!

Ron

Ron O'Connor, CSBO
Chief Financial Officer/Treasurer
Please see attached...

Tonya Crow
Energy Marketing Manager
Prairieland FS, Inc.
Email: crowt@prairieland.com
Office: 217-246-6667
Fax: 217-370-2140
May 21, 2018

Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

RE: Volkswagen Beneficiary Mitigation Plan

Prairieland FS appreciates the opportunity to comment on the Draft Beneficiary Mitigation Plan (Volkswagen Environmental Mitigation Trust Agreement) this Wednesday night, May 23, 2018. I plan to be in attendance at the meeting in our Illinois EPA Headquarters. The Volkswagen Settlement presents a unique opportunity for our state to accelerate the adoption of environmentally-friendly alternative fueled vehicles.

One great benefactor of the settlement would be Illinois school children and their districts across the state. We commend the recognition of school bus projects in the Beneficiary Mitigation Plan. Illinois school districts and their transportation providers deserve this lifeline to upgrade their fleets with environmentally-friendly alternative fuels that fit their needs.

However, we encourage you to amend the category for the projected allocations of trust funds titled “All Electric School Bus Projects” to allow Illinois school districts and their transportation providers to identify other environmentally-friendly alternative fuels such as new clean diesel, natural gas, propane, and hydrogen versions in addition to electric as referenced in “On Road Projects” category. School districts can cover large geographic areas with many routes beyond the potential range of electric buses. Opportunities for all of Illinois school districts to apply for clean fuel bus funding assistance should also be allowed by this program.

There are already many Illinois school districts that have buses running on clean burning fuel. There are already over 800+ buses in more than 40 school districts in Illinois operating on Propane and they’ve seen great savings to their budget by adapting these buses in their districts. Expanding the allocation to include several options of environmentally-friendly alternative fuels provides flexibility with long-term savings for school districts as school transportation budgets continue to shrink. It allows the choice to be made with consideration to the initial investment costs, ongoing maintenance costs, and the transportation needs of the school district.

Thank you for your consideration of this request.

Sincerely,

Tonya Crow
Energy Marketing Manager
Prairieland FS, Inc.
IEC is a nonprofit environmental organization that represents over 80 environmental organizations with 250,000 combined members throughout Illinois. We are incredibly grateful for the opportunity to provide public feedback on the VW draft management plan and are thankful to Director Messina for listening to our input on this important issue.

The funding that Illinois will receive has the ability to be part of a plan that transforms Illinois' transportation sector. As part of the Illinois Clean Jobs Coalition, IEC was part of an announcement earlier this year on our clean energy plans for the future through our Listen, Lead, Share campaign. Transportation is an important part of that plan. If we truly want to tackle climate change and lead the clean energy economy, we need to answer the following question - how do we replace the equivalent of one million gasoline and diesel-powered vehicles on the road with electric vehicles, mass transit and other alternatives? The funding from VW can help kick start a transformation of Illinois' transportation sector.

Overall, we are concerned that the calculations in the plan will focus on short-term benefits and ignore long-term transformative potential. The Agency is focused on reducing Nitrogen Oxides (NOx) emissions; however, the benefits of reducing NOx, small particles AND other greenhouse gases such as CO2 are huge. New EV infrastructure purchases could have lasting benefits as these installations may be used for 20, 40 or 50 years.

First, we are so grateful for the inclusion of 10% of the funding for electric school buses. These buses will reduce emissions for children that need it most. We'd like to see the final plan keep that funding allocated to electric only school buses. We'd like to see a change with privately owned buses, which are more likely to serve low income communities and we'd like to see these buses receive the same match as publicly owned buses.

Second, the Mitigation Agreement allows states to use 15% of the funds for light duty electric vehicle infrastructure and we would like to see funding for light duty EV infrastructure. Some argument has been made that Electrify America - VW’s charging business – would satisfy that demand in Illinois. While the details are unknown on Electrify America’s plan, it would satisfy less than 10% of the demand in Illinois, while likely placing infrastructure in places that are best for the current market, not market development. This includes the Metro East area, where there would be no charging stations placed by Electrify America.

Finally, the plan is too heavily weighted towards off road equipment. Unlike other states’ plans, the Illinois EPA directs 65% of the money for OFF-ROAD projects. More dollars should be committed to ON-ROAD investments. For example, there is no money for municipal buses. Off road projects almost certainly will be clean diesel or natural gas. Both will rely on carbon burning fuels. Most natural gas will be obtained by fracking. Diesel will burn conventional fuel and while it is cleaner than conventional diesel, every day a diesel vehicle is driven, it runs dirtier and less efficiently because of wear and tear on the engine and pollution controls.

In contrast, through the passage of the Future Energy Jobs Act, every day that goes by Illinois has a cleaner and cleaner electricity sector. Further, electrification of vehicles helps to make the grid even friendlier to renewable energy through nighttime usage of electric vehicle charging stations.

Finally, for all of these components, we urge the IEPA to make sure the funding is able to be spent in communities that need it the most. This funding has tremendous potential to impact environmental justice communities that have been hurt by pollution.
Testimony on VW Mitigation Plan
Presented by Allen Grosboll, Legislative Director
Environmental Law and Policy Center

My name is Allen Grosboll. I am Legislative Director for the Environmental Law and Policy Center. ELPC is the largest regional environmental advocacy organization in the Midwest.

ELPC is focused on transportation issues and transforming the transportation sector to encourage zero emission vehicles and reduce pollution. From the beginning, we have followed the VW legal violations and been involved in discussions about the VW Mitigation Plan.

I first wish to express appreciation to Governor Rauner and Director Messina for listening to concerns about transparency and agreeing to hold these public listening sessions. It is always beneficial to shine a bright light on public policy issues, provide opportunities to involve the public and listen to the thoughts of citizens, not just interest groups. Thank you for being here today and seeking public input.

To begin, I wish to express strong support for the IEPA proposal to commit 10% of the VW mitigation funds for electric school buses. While the state’s share of VW funds is not sufficient to do everything that everyone would like to do, the nearly $109 million does provide an opportunity to stimulate innovation and transformation.
Providing funds for electric school buses will stimulate interest in zero emission buses and bring these vehicles to several Illinois school districts. The VW Mitigation Agreement places a strong emphasis on focusing funds to benefit our most vulnerable people. This includes senior citizens, residents with serious breathing issues and children.

Whether riding on diesel buses or standing beside idling buses, school children are exposed to harmful emissions. Breathing diesel fumes is not healthy for children and exacerbates existing breathing problems. Investing in electric school buses is entirely consistent with the Mitigation Agreement’s emphasis on serving vulnerable populations.

Once a district has used VW funds to purchase an electric school bus and needed charging equipment, it will be much easier for that school to purchase another one. Once a district has electric buses in operation, it will be easier for districts to evaluate their long-term costs savings and begin to plan for conversion of fleets to zero emission buses. And once one district has an electric school bus, other districts will be able to learn from their neighboring district about the public health benefits and operation and maintenance cost savings associated with electric buses.

We applaud IEPA for including funds for electric school buses and urge you to retain this in the final mitigation plan. As we have seen with electric transit buses, as Illinois and other states acquire more electric school buses, the costs will drop making purchases less expensive.
VW Settlement- IL Public Comments
Tuesday, May 22, 2018
1:13 PM

My name is Matt Lawrence, and I am a Regional Sales Manager for Midwest Transit Equipment.

Midwest Transit Equipment has been in the school bus industry for over 42 years. We have 4 locations in the state of Illinois and employ over 200 people in the state of Illinois.

We are excited and supportive of the steps taken by the Illinois EPA to improve the air quality that impacts our children riding school buses in the state of Illinois. Public schools in Illinois are serviced by their own fleet of buses as well as buses provided by Private Contractors.

We would ask for consideration to reallocate funding from 20% to 50% for school bus initiatives. This increase in School bus funding could come from a reduction in the off road allocation.

We would also ask consideration for the ability of a dealership such as ours, to retrofit old diesel technology with new clean diesel, propane, and other alternative fuels. This would impact the above mentioned school children in Illinois by cutting off the supply or replacing higher and dirtier emission engines.

We don’t believe the best qualifier to be limiting the model year, but believe it should be based on the reduction of actual NOx emissions in Illinois.

We are excited about the future opportunities these funds will bring to bettering the air quality for our students and all citizens of the State of Illinois. Midwest Transit Equipment, as the largest bus dealer in North America, believes we can partner to make the biggest impact for our state. We urge you to consider our proposal and appreciate the opportunity to voice our suggestions here today.

Thank you for your time.
I am concerned however that the IEPA plan does not include any funds for light duty electric charging stations. This is a problem we hope you will address. Other Midwest states have committed the full allowable 15% for charging stations. Illinois will benefit from limited Electrify America funds, but there are two problems relying on that program. Electrify America has admitted its program will not meet the needs of the Chicagoland area. Second, no Electrify America funds are committed to the Metro East, the state’s second non-attainment area.

I also wish to urge you to shift additional dollars to support more “on-road” projects. This will help the state fund more projects associated with municipal buses. Again, it is consistent with the VW Mitigation Plan to focus dollars to help populations that have been disproportionately burdened by pollution.

Finally, I wish to offer a suggestion about the Agency’s efforts to get the “biggest bang for the buck.” The public does not know the assumptions you are using to calculate costs because it is not clear what the state’s VW funds match will be in all projects. Similarly, we do not know your benefits calculation for each type of project. Without knowing the dollars IEPA will invest or your estimated benefits (or how they were calculated) how can citizens ascertain the true cost-benefit of a project?

Thank you again for hosting tonight’s listening session.
Volkswagen Settlement Comment

Thank you for giving me this opportunity to share my views on how to put the $108 million-dollar Volkswagen Settlement to its best use!

I support the proposed 15% Carbon-Free Transportation allocation for an electric-vehicle infrastructure, and especially dedicating at least 10% for electric school buses. Currently, there are too many diesel vehicles idling at our schools, bus stops and hospitals, fouling the air where it needs to be clean the most. And since these vehicles are outdoors all the time, a roof of solar panels would help keep them running after an initial plug-in charge has been drained.

Along those lines, the slow adoption of private electric vehicles in Illinois is due in large part to the lack of plug-in EV fast-charging stations, which the 15% Carbon-Free Transportation Allocation would also address. With that support, progressive automakers will be able to offer and sell more EV’s to the public.

All of these points also apply to Illinois’ rail transportation, on which we’ve already spent millions for High-Speed. Replacing diesel engines with electric ones will not only improve air quality, but will also save money on fuel, equipment and maintenance, as well as allow them to accelerate faster and stop quicker in emergencies, due to their reduced weight. All of these advantages also apply to the automotive electric vehicles mentioned before.

Thank you again for your time.

Don Dieckmann,
Sierra Club Energy & Climate Committee,
Citizens Climate Lobby Co-Chair,
Climate Reality Project Presenter,
Founder/CEO, Better Building Institute Inc. (nfp)

614 W. Sierra Drive, Alton, IL 62002-7435
(618) 580-7055, Don@BetterBuildingInstitute.org
My name is Ken Pounce, Regional Sales Manager for Midwest Transit Equipment. We have been in the school bus industry for over 42 years, have 4 locations in the state of Illinois and employ over 200 people in Illinois.

We are excited and supportive of the steps taken by the Illinois EPA to improve the air quality that impacts our children riding school buses in the state of Illinois. Public schools in Illinois are serviced by their own fleet of buses as well as buses provided by Private Contractors. We would ask for consideration to reallocate funding from 20% to 50% for school bus initiatives. This increase in school bus funding could come from a reduction in the off road allocation.

We feel the current allocation for electric school bus is appropriate. Electrification of the school bus industry is interesting, but today it is not commercially viable. The cost of one electric bus is 4 to 5 times the current cost of a school bus. Today, propane powered school buses have a slight increase over diesel. This equates to thousands of dollars more, whereas electric is hundreds of thousands of dollars more than diesel. Our communities will be better served by acquiring more propane and clean diesel school buses in Illinois.

We would also ask consideration for the ability of a dealership such as ours, to retrofit old diesel technology with new clean diesel, propane, and other alternative fuels. This would impact the above mentioned school children in Illinois by cutting off the supply of higher and dirtier emission engines.

We don’t believe the best qualifier to be limiting the model year, but believe it should be based on the reduction of actual NOx emissions in Illinois.

We are excited about the future opportunities these funds will bring to bettering the air quality for our students and all citizens of the State of Illinois. Midwest Transit Equipment, as the largest bus dealer in North America, believes we can partner to make the biggest impact for our state. We urge you to consider our proposal and appreciate the opportunity to voice our suggestions here today.

Thank you for your time.
ATTN: Public Outreach Sessions  
Wednesday May 23rd, 2018  
Illinois EPA Headquarters  
6:00 p.m.

From: Angela Tin, VP of Environmental Health, American Lung Association

Thank you for this opportunity to provide my comments. My name is Angela Tin and I am Vice President of Environmental Health for the American Lung Association. I have been with the American Lung Association for 14 years. My previous work experience includes 22 years with the Illinois Environmental Protection Agency working in regulatory programs in the areas of Water, Land and Air.

The American Lung Association has long been involved with efforts to alleviate the burden of mobile source pollution and we have program experience in USEPA’s Diesel Emission Reduction Act or DERA.

Within DERA, the American Lung Association has been awarded $19 Million dollars in diesel reduction grants. These projects included partnerships with 107 fleets and 1,407 individual vehicles. Through our grants, our partners have been able to reduce 824,131 tons of quantifiable diesel emissions, with an estimated $1.7 Million in health benefits.

In addition, we have been a long time member-of the USEPA’s Midwest Clean Diesel Initiative. During the monthly calls and yearly meetings, USEPA has repeatedly requested updates from every Midwest state agency that has a role in the Volkswagen settlement and their efforts in conducting public notices and public meetings.

The American Lung Association comments & recommendations for this issue are as follows:

1. A Task Force should be convened to represent all interests. Other states have formed task forces and found this to be beneficial. Representatives of a cross section of environmental groups can bring new ideas to the table and will make compromises so that new ideas are formed. When the IEPA functions alone, many options will be missed when considering funding opportunities. Creating a task force minimizes that risk. Since there has been language that
• Diesel exhaust from buses poses a particular public health risk; buses primarily travel where there are lots of people, including in the more densely-crowded areas of cities, on the busiest roads, and near schools. It is important that the final plan contain no less than a 10% funding allocation for all-electric school buses, no less than 10% of the overall funding for electric transit buses and Illinois public transit districts.

• IEPA’s draft plan should also be adjusted to ensure that school children living in districts that utilize private bus contractors, which are primarily urban include many EJ communities, are not put at a disadvantage to children in districts that own the buses. The draft plan, which now requires contractors to provide double the match that districts do, should eliminate this barrier.

Carbon-Free Transportation

• Takeaway: It is important that Illinois allots the maximum 15% for electric vehicle infrastructure; and 10% for all-electric school buses; and that all other projects be all-electric over clean diesel for students all over the state not just in Chicago.

• We now have a tremendous opportunity to use this money to reduce air pollution and work towards a carbon-free transportation sector.

• Use of these funds for all-electric projects will enable Illinois to unlock economic and environmental benefits that come from mass EV adoption.

• By committing these dollars to electrification, the state can jumpstart the EV market, reduce electricity bills due to downward pressure on rates, and improve air quality for all Illinoisans.

• Electric school buses can uniquely support renewable integration with the electric grid.

• All-electric buses are available and ready to roll, and they’re cleaner, healthier and often cheaper for transit agencies to run in the long-term.

• Last year the total number of electric, battery-driven public transit buses in the US grew by 83 percent.

• Every day a diesel vehicle is driven, it runs dirtier and less efficiently because of wear and tear.

• Electric vehicles emit no tailpipe pollution and the electricity they use is increasingly coming from solar and wind power due to Illinois’ energy law, meaning electric vehicles will get cleaner as time passes.

For questions contact colleen@ileniro.org, 217-544-5954
the Volkswagen program can use DERA as a model, the success and experience of the American Lung Association’s efforts should be considered.

2. All technologies that will reduce air pollution should be included rather than limiting potential funding to a few choices. In the current draft, there is a large emphasis on electric vehicles, potentially up to 95% of the funding. Electricity in Illinois is created mostly by nuclear and coal plants, which create much of the air pollution our state experiences, making other fuel types potentially more beneficial for our state air quality. Emission reductions should be the ultimate focus of these funds.

3. All areas of Illinois should be included in the considerations. The people who suffer from lung disease and cancer reside in all communities in Illinois, not just in Chicago or Metro East or large population areas. According to American Lung Association data, approximately 342,000 people impacted by lung cancer or respiratory disease live outside of the prioritized funding areas. That this amount of people won’t even be considered for funding from this settlement is unacceptable.

Thank you again for this opportunity to provide comments. We respectfully request a response to these comments.

Angela Tin
The most basic definition of the word “opportunity” is something like: “a possibility due to a favorable combination of circumstances.” Though the reason we are here tonight is the result of circumstances involving unethical actions, irresponsibility, endangerment and corruption, the truth is we now have an opportunity. We are poised at that “lemonade out of lemons” juncture. But to truly seize opportunity, one must see beyond what is already there and envision what should come next, taking into account the impact of current decisions on the future—and how to make a better future—and the promise of greater opportunities to come.

For instance, with a bit of research, anyone can find a large body of reliable research showing that children who ride school buses are regularly exposed to dangerous levels of highly toxic pollution because the buses use dirty diesel fuel and idle for extended periods of time, as young passengers get on and off and buses wait in oftentimes lengthy queues. If we were to truly seize an opportunity using the settlement funds from this litigation, we would invest money in our children—in our future, knowing that replacing outdated diesel transportation with clean electric buses not only protects our children’s health but the health of future generations, that it not only eliminates high pollution levels in congested areas where buses typically run but also brings down visits to the ER, claims to health insurance companies, missed days at work or school, that investing in new clean-energy technology that eliminates rather than causes environmental hazards is not only smart but also innovative and prosperous.

That vision...that type of innovation and courage seizes true opportunity. Seeing what is not there...but could be there...but should be there.

Does the Illinois EPA have vision? Can it see opportunity? I wonder because The state’s current draft spending plan focuses on switching out older, dirty diesel engines for newer, cleaner diesel engines, which will reduce some air emissions, but will continue to rely on dirty fuels like diesel. It would seem the IEPA is the long-term consequence of this decision.

In fact, the IL EPA has dedicated no funds to electric vehicle charging infrastructure or public transit electrification projects. They intend to clean up and continue to use what is already there. In other words, we will have moved forward without vision, squandering opportunity and—long; instead, to what is fatally familiar.

Toni Oplt
As a former school district employee, I am all too familiar with the high rate of asthma among children in the metroeast. The Illinois Department of Public Health Office of Women’s Health and Family Services report of November 2016 highlighted that childhood asthma inpatient hospitalization and Emergency Department visit rates align closely with census tracts of high concentrated disadvantage, disproportionately affecting Non Hispanic Black children. Madison & St. Clair counties had greater than 99/2 per 10,000 Emergency Department visits related to asthma (more than 2x the Healthy People 2020 objective and aligned with the higher state rates with Chicago and Cook County.

Although a shift to more efficient diesel is in the right direction, a far better option would be to zero emission/electric school buses and public transit buses. Our children are already at a much higher risk for respiratory illnesses like asthma, with resulting lost educational time. We can’t afford to sacrifice their health, when a far better option of electric buses, and a corresponding electric infrastructure to support this shift would move our counties toward a healthier future.

The final plan should reflect equity and justice for disadvantaged areas (asthma prevalence is nearly twice as high in poor households), and contain no less than a 10% funding for all-electric school buses and additional funding for public electric transit buses (many of our older schoolchildren ride the community transit buses).
Good evening,

As a legislator that has been closely following the Volkswagen Settlement and the IEPA's Draft Beneficiary Mitigation Plan, I want to thank the IEPA for hosting this outreach session and providing continued opportunities for public comment. Myself, along with advocates and colleagues, called on the agency to provide for a public forum, and I am glad to see Director Messina and the agency being responsive.

Volkswagen committed a real wrong, and Illinois residents suffered. How we spend the settlement funding matters hugely for public health, our environment, and our transportation sector.

Through conversations with IEPA, I am looking forward to seeing changes in the final plan that reflect comments received from advocates across the state. These include: maintaining the 10% allotment of funds for electric school buses, carving out funding for light-duty electric vehicle infrastructure, reducing the percentage of off-road funding and increasing that for on-road projects such as municipal electric buses, and ensuring that all other projects achieve the highest air emission standards possible.

I am encouraged by my conversations with IEPA and look forward to seeing a final plan that includes these changes and provides Illinois with the greatest opportunity to achieve emissions reductions, improve air quality for environmental justice communities and our children, and work towards a carbon free transportation sector.

Thank you.
May 23, 2018

Comments at Public Hearing on VW Settlement
St. Paul Baptist Church

We thank the IEPA for holding this hearing and receiving our comments. Thank you.

Our comment: Electrify, Electrify, Electrify.

Since moving to Illinois 13 years ago, we both have noticed difficulty with breathing and respiration. Bill’s exercise asthma has increased and gotten worse. He has used a nebulizer for the very first time in his life. I never had allergies and chronic lung problems before moving to Metro East.

Metro East serves up some of the worst air in our nation. Much of it can be traced back to the use of fossil fuels.

Because of this settlement, Illinois now has an opportunity to electrify. Illinois has a chance to clear our air and let us be healthier. Illinois can join other states in bringing us clean air.

Spend all you can on electric buses, cars, trains, boats, all transportation.
Spend all you can on electric charging stations and electric infrastructure.

Get off fossil fuels now. Don’t waste precious money on old fossil fuels. We your friends and fellow taxpayers insist. Electrify, Electrify, Electrify.

Thank you,

Kay Ahaus

Kay Ahaus
Thanks for this follow up information and also for your time on the phone last week.

As discussed, my team at Hendrickson is working on a project that includes the repower of a vehicle with a novel range-extender hybrid concept focused on Class 7/8 Heavy Commercial Vehicles. The concept would be to take a typical Class 8 diesel powered on-high truck or tractor and repower it as an electric vehicle with a novel range-extender hybrid power source. While I cannot disclose all details of the system, I can share that the electric powertrain portion would be fairly typical, with the key difference being that the battery pack would be smaller than typical offering a range of approximately 25-50 miles. The idea is to leverage microturbine technology running at constant RPM and peak efficiency to charge the battery continuously thus providing for range-extension. The vehicle is intended to eliminate the range anxiety typically associated with battery electric vehicles (BEV). Additional benefits include:

1) The ability to run as a partial zero emission vehicle (PZEV) if required in certain urban areas (up to the limit of the battery range)

2) Lower total emissions (particulate and NOx) as microturbine technology is fuel agnostic and does not require exhaust after-treatment. Specifically, this repower will utilize compressed natural gas (CNG) as fuel but could use diesel or other fuel options.

3) Lower weight and cost from smaller battery size (Batteries are the key driver of weight and cost in EVs)

4) Lower overall system weight due to compact size of microturbine power source and elimination of diesel engine and exhaust after-treatment.

5) Extended range – equivalent to typical diesel units

As I understand the VW Mitigation trust fund is to be utilized for projects that repower or replace eligible engines for vehicles that fall into one of ten possible categories and that engines or vehicles may be repowered or replaced with new diesel, alternate fuel or electric engines. Specifically category 1- Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks) would apply in this instance. I feel that this project would be a clear fit for funding under the program, however I did not see where it is clearly spelled out whether or not development programs of this sort would be covered. As you are currently actively seeking feedback on the draft Beneficiary Mitigation Plan (BMP), I respectfully submit this request that development projects (ie Demonstrator proof-of-concept) such as this be considered for funding. Additionally, I would request consideration of ‘in kind’ contributions from beneficiaries such as Hendrickson be considered as part of the 50%-75% cost sharing noted in the BMP. ‘In kind’ contributions to be defined as both ‘soft costs’ associated with Engineering for the design and development, Labor and overhead associated with building and testing of said unit, along with ‘hard costs’ associated with the actual repower conversion of the vehicle including components and subsystems as well as the vehicle cost.
While I understand that the funding awards will be on a competitive basis, at this point I am just trying to understand if your team feels a project such as the one I’ve described here would be potentially eligible and if I should plan to go forward with the application process when it becomes available.

Thank you in advance for your consideration and please feel free to contact me if more information/clarification is needed at this point to determine if this project is a clear ‘NO’ or if it may be eligible.

Regards,

Jeff R. Zawacki
V.P. of Advanced Technology
Advanced Technology Group
www.hendrickson-intl.com

From: Frost, Brad <Brad.Frost@llinois.gov>
Sent: Tuesday, May 15, 2018 3:22 PM
To: Zawacki, Jeff <Jeff.Zawacki@llinois.gov>
Subject: RE: Illinois EPA VW Outreach Sessions

EXTERNAL MESSAGE

Jeff,

You do not need to pre-register. There will be sign-in and registration to speak at the door. Comments may be sent to EPA.VWSettlement@illinois.gov

A project application period will not occur until we submit a final BMP to the Trustee.

Our VW Settlement webpage has much information about the Settlement and our draft BMP, http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index

Brad

Brad Frost
Manager, Office of Community Relations

Follow us  

From: Zawacki, Jeff
Sent: Tuesday, May 15, 2018 1:13 PM
To: Frost, Brad
Subject: [External] FW: Illinois EPA VW Outreach Sessions

Brad,

I received your information from my colleague, Mike Keeler. I am interested to learn more about the Beneficiary Mitigation Plan. I would like to try to make the May 30th event, is there anything I need to do to register? Also, if I cannot make the event on the 30th, will there be further opportunities to get involved and learn how to be considered for the plan?

Thanks,

---

From: Mike Keeler
Sent: Friday, May 11, 2018 2:09 PM
To: Zawacki, Jeff
Subject: Fwd: Illinois EPA VW Outreach Sessions

Begin forwarded message:

From: "Frost, Brad"
Date: May 11, 2018 at 1:54:58 PM CDT
To: EPA.VWSettlement
Subject: Illinois EPA VW Outreach Sessions

The Illinois EPA will host three public outreach sessions on its draft Beneficiary Mitigation Plan to use the state's $108 million allocation from the Volkswagen Settlement. Agency representatives will give an overview of the Settlement and draft BMP, and answer questions and accept public input from attendees.

Public Outreach Sessions will be held in the evening from 6:00 - 8:00 p.m. at the following locations:

Wednesday, May 23, 2018
Illinois EPA Headquarters (North Entrance)
Sangamo Conference Room
1000 East Converse
Springfield
Thursday, May 24, 2018
St. Paul Baptist Church
1500 Bond Avenue
East. St. Louis

Wednesday, May 30, 2018
James R. Thompson Center Auditorium
100 West Randolph
Chicago

If you have questions about the outreach sessions or Illinois’ draft BMP, please contact me.

Brad Frost
Manager, Office of Community Relations

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Hi Brad-- below is a typed copy of Teresa's statement from the VW hearing in Springfield on Wednesday night. Thanks, Elizabeth

Good evening, I'm Teresa Haley state president of the IL NAACP. Clean air is a Human and Civil Rights Issue. Poor people and people of color live in areas where electric school buses and community buses are needed.

How much of this money will actually go to poor or underserved communities? People in my community suffer from asthma -- I suffer from asthma and I have to roll my windows up when I'm next to a diesel bus. We can't afford electric cars with replacement batteries that only last 50,000 miles, but you have an opportunity to impact our air quality by putting electric buses on the road in our community.

The NAACP is asking that a larger percentage go to communities of color and poor communities. We also need to prioritize adding electric buses to the communities that have a bus shortage.
Hi

Busy time of the year and I was not able to make it to the IEPA in Springfield. I have attached my speech and the other letters I have sent relating to the VW Settlement. I hope they can be used as written testimony. Please keep in touch and I would be glad to meet with IEPA personally once school is out. Take care Vic

--

Victor White
Superintendent of
Prairieview-Ogden #197

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May 24, 2018

Dear IEPA;

My name is Victor White – Superintendent of Prairieview-Ogden School District #197 in Champaign County. I have been the superintendent there for 22 year. The PVO District is a Pre-School through 8th grade district (Elementary District). PVO is a rural school district that encompass 110 square miles (17 miles North to South as the bird flies – 11 miles at the widest East to West). We run 6 bus routes and student are on the bus for 30 minutes or more. We have three buildings: K-4 building in Royal, K-6 building in Ogden, and 7th/8th grade building in the country. We have approximately 275 students in Pre-School through 8th grade. Once the students graduate from PVO, he/she will attend one of three high schools (St. Joseph-Ogden HS, Rantoul Township High School, or Armstrong High School District).

The Prairieview-Ogden District has been environmentally conscious and is always looking for solutions to reduce our environmental footprint. Some big examples are: Geothermal System at one school, a 50 Kw Wind Turbine, 1Kw solar panel at each building, all new low water bathroom urinals/toilets – they use very little water, new LED/T-8 lighting, and new windows/doors just to name a few.

As most of you know, Diesel powered vehicles and equipment account for nearly half of all nitrogen oxides (NOx) and more than two-thirds of all particular matter emissions from transportation sources – according to the Union of Concerned Scientists. Young children are most at-risk since they have underdeveloped lungs. Air pollution can have a variety of negative effects on students’ lungs and can lead to health problems (asthma – one out of ten children have) and lung damage). 78% of all school buses on the road are diesel. Also, a typical diesel oil change includes two new oil filters and 32 quarts of oil – which is a lot of pollutants to dispose of on top of the nitrogen oxides.

To show my dedication and great interest in the VW environmental mitigation trust fund, I reached out by phone/follow-up email on March 9, 2017 relating to Illinois getting awarded around 105 million. Then I wrote a letter on May 3, 2017 to Senator Scott Bennett, Representative Chad Hays, and Senator Chapin Rose. Senator Bennett then read my letter on the Senate floor. Then April 5, 2018 – I sent written testimony to the Senate Environment and Conservation Committee for the IEPA Draft VW plan. Plus, from March of 2017 to now, I have been in contact with Mr. Allen Grosboll, Mr. Brad Frost, Mr. Dan Peters, Ms. Colleen Smith, Mr. Kent Mohr, Ms. Tamara Dzubay, Jamie Ponce, and Ms. Susan Mudd to show my interest and dedication to getting electric or propane school buses.

As you know, school districts are transporting 3 year olds up to 21-year-old students (our Future) on school buses daily. So I am very pleased to hear that Illinois EPA is setting aside money for new school busses that will reduce the nitrogen oxide emissions and helping reduce negative health effects to our students/future. Everyone in this room knows – “YOU CAN’T PUT A PRICE ON STUDENT SAFETY!”

PVO would be very interested in pursuing these funds! Thank you for your time.

HOME OF THE MUSTANGS!
Senator Scott Bennett
52nd Senate District
45 E. University Avenue, Suite 206
Champaign, IL 61820

Dear Senator Bennett;

I have been following with great interest the news about a new trust fund that will be providing significant dollars to the states for clean air improvement. The U.S. Department of Justice and Volkswagen recently entered into an environment mitigation trust agreement that will provide Illinois with more than 100 million for eligible environmental projects to offset the air pollution damage caused by VW’s pollution violation. As you know, PVO District is very environmental friendly with a geothermal system, a 50kW Wind Turbine, low flow toilets, three 1kW solar panel systems, and either LED/T-8 lighting just to name a few.

My interest in the VW mitigation funds relates directly to one of the eligible mitigation actions, which is the replacement of diesel-powered school buses with all-electric non-polluting buses. The Prairievew-Ogden Community Consolidated School District #197 would be very interested in pursuing these funds. Besides the environmental benefits for students and school employees of zero emission buses, the District would reduce its operating costs by converting to these all-electric vehicles. These funds would really help because the State Transportation Budget has been pro-rated for years (72%) and this year only one payment has been sent to districts throughout the State of Illinois Districts. Therefore, our small rural district bus fleet is getting older and older because we can’t buy new buses.

I understand that the State of Illinois will be required to prepare a plan for how it intends to spend the VW mitigation money. We would appreciate it if you could advocate for the state to commit a significant portion of the funds for school bus replacement. The Prairievew-Ogden District and other rural districts would benefit greatly from this program. These funds can protect the public health of our school children and save money for taxpayers.

Thanks for your continued interest in our schools and let me know if I may provide you additional information concerning our interest in electric school buses.

Sincerely,

Victor White

May 3, 2017
April 5, 2018

Dear Senate Environment and Conservation Committee members;

I would like to submit my letter as written testimony for the IL EPA’s Draft VW plan this Friday, April 6 in Chicago. I will not be able to attend the hearing in person. I have been following with great interest the news about a new trust fund that will be providing significant dollars to the states for clean air improvement. The U.S. Department of Justice and Volkswagen recently entered into an environment mitigation trust agreement that will provide Illinois with more than 100 million for eligible environmental projects to offset the air pollution damage caused by VW’s pollution violation. Prairieview-Ogden School District #197 is a very environmental friendly school district (a few examples: A geothermal system in and a 50kw Wind Turbine supplying electricity at one of our buildings, low flow toilets, a 1kw solar panel system at each of our three buildings, and either LED/T-8 lighting just to name a few).

I wrote to Senator Bennett back on May 3, 2017 (see attached); in which he read my letter at the hearing back in 2017. My interest in the VW mitigation funds relates directly to one of the eligible mitigation actions, which is the replacement of diesel-powered school buses with all-electric non-polluting buses. As you know, diesel buses emit NOx while running, a problem which is furthered by the fact that school buses idle while picking up and dropping off children furthering student exposure.

We have as young as 3 year olds riding the school bus. Children are most at-risk since they have underdeveloped lungs. Plus, students with asthmatics (most common chronic condition among one out of ten children) are triggered by pollutants like NOx emissions from diesel school buses.

The Prairieview-Ogden Community Consolidated School District #197 would be very interested in pursuing these funds. Besides the environmental benefits for students and school employees of zero emission buses, the District would reduce its operating costs by converting school buses to all-electric vehicles. These funds would really help because the State Transportation Budget has been pro-rated for years (72%) and this school year we have only received one FY18 payment from the Comptroller. Therefore, our small rural district bus fleet is getting older and older because we can’t afford to purchase new bus(es).

The Prairieview-Ogden District and other rural districts would benefit greatly from this program. These funds can protect the public health of our school children and save money for our taxpayers.

Every one of us know that you can’t put a price tag on student safety!

Sincerely,

Victor White
Brad,

On May 23, at the Illinois Environmental Protection Agency’s Public Outreach Session in Springfield, IL, the Illinois Propane Gas Association again formally requested the following funding be included in the Illinois Environmental Protection Agency’s final Volkswagen Beneficiary Mitigation Plan. For the record, the Illinois Propane Gas Association has been requesting propane buses be included in Illinois final plan for several months and has submitted requests in writing and at hearing to its case.

Formal request for Propane School Bus Projects:

Up to 10 percent (or up to approximately $10,867,968) of the Volkswagen Trust funds allocated to Illinois to replace diesel school buses with propane school buses to meet the purpose of the Trust Agreement and Illinois’ goal to reduce and maximize NOx reductions.

The Illinois Propane Gas Association further request that every school district in every county in Illinois and every private school bus fleet servicing any Illinois school district in any Illinois County is eligible for propane school bus rebates. The IEPA’s designated priority funding zones under its draft VW BMP do not apply to propane school buses eligibility.

It has been well established in public forums (Senate and House hearings and IEPA public outreach session) that there is a general consensus that reducing student transportation NOx emissions is a very high priority.

The Trust funds may be used to reimburse government applicants up to a maximum of 75 percent of the costs, and 50 percent for non-government applicants for the propane school buses.

These are the same terms has the electric school bus allocation under IEPA’s draft BMP.

Furthermore, the Illinois Propane Gas Association recommends rebates for propane school buses commence day one of the program. Unlike electric school buses, of which there are none operating More than 40 Illinois school districts have invested in over 800 propane school buses in recent years, greatly reducing NOx emissions around
students every school day. With the affordable propane dispenser infrastructure already in place, doubling Illinois’ propane school bus fleet is achievable today.

The attached spreadsheet further proves the case for propane school bus NOx emissions reductions. Propane school buses represent the best-bang for the buck in student transportation and a huge improvement in NOx reductions compared to diesel buses.

Thank you for your consideration.
Sincerely,

Aaron DeWeese, Executive Director
Illinois Propane Gas Association

State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
<table>
<thead>
<tr>
<th>Class C School Bus Type</th>
<th>Annual NOx Reduction</th>
<th>Unit Price</th>
<th>Cost per NOx lbs. Reduction</th>
<th>Propane School Buses VS. Other School Buses</th>
<th>Infrastructure Cost</th>
<th>Illinois Buses in Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane (LPG)</td>
<td>912 lbs.</td>
<td>$93,000</td>
<td>$102</td>
<td>Most cost effective</td>
<td>$5,000 - $75,000</td>
<td>Over 800***</td>
</tr>
<tr>
<td>Compressed Natural Gas (CNG)</td>
<td>837 lbs.</td>
<td>$125,000</td>
<td>$149</td>
<td>32% more cost effective than CNG</td>
<td>Upwards of $1,000,000</td>
<td>None</td>
</tr>
<tr>
<td>Electric</td>
<td>1,137 lbs.</td>
<td>$350,000</td>
<td>$308</td>
<td>67% more cost effective than Electric</td>
<td>Upwards of $1,000,000</td>
<td>None**</td>
</tr>
<tr>
<td>New Diesel</td>
<td>86 lbs.</td>
<td>$90,000</td>
<td>$991</td>
<td>90% more cost effective than Diesel</td>
<td>NA</td>
<td>15,000*</td>
</tr>
</tbody>
</table>

Data from Argonne National Laboratory 2017 AFLEET Calculator

* Total combined old and new diesel school buses

**Less than 300 total electric school buses currently on the road in the United States

*** Over 10,000 total propane school buses currently on the road in the United States
Thank you for giving me the opportunity to speak this evening.

My name is Cynthia Linton and I live here in Chicago. I have great concern about the world my grandchildren and their children will be living in. I want them to breathe clean air and not be subjected to the heatwaves, flooding, diseases and other negative impacts of climate disruption. So, I am committed to reaching 100% renewable energy as quickly as possible.

Therefore, I ask you to allocate the $108M we will get from the Volkswagen settlement to electric cars, buses and other means of transport rather than diesel. I applaud your plan to spend 10% on electric school buses. I also ask that you allocate 15% to electric charging stations, as other Midwest states are doing.

I was in California recently, where there were many Tesla’s on the road. It reminded me that when I first got my Prius 10 years ago, there were many in California but few yet in Illinois. Now I see them everywhere. Electric cars will be coming here soon, so let’s make sure to give them the infrastructure they will need.

In my opinion, none of this money should be spent on fossil fuels like diesel. The settlement is a gift and one that should help us advance quickly into the modern and cleaner world of renewable energy.

Thank you.

Cynthia Linton
Members of the IEPA, I appreciate the opportunity to testify before you about the use of funds resulting from the Volkswagen settlement. As an environmental volunteer who has spent many years fighting pollution in our environment, I share your sense of optimism that these funds may be used to benefit our environment and public health through the reduction of harmful fossil fuel pollution.

There is much that is good in the draft plan the IEPA has released. It is commendable that you have committed 10% of the proceeds toward purchasing all-electric school buses. This is the highlight of the draft plan in my opinion, and is the single feature of the plan that does the most to curtail pollution.

As far as I am concerned in terms of the rest of the plan, I would encourage you to aim higher and commit more funds toward all electric buses and more funds toward all electric vehicle infrastructure—which includes vehicle charging stations. I believe increasing the number of electric-vehicle charging stations will make owning electric vehicles even more attractive.

So I'd like to tell you briefly why I'm so enthusiastic about electric vehicles in general.

Seven years ago, my wife and I made a commitment to electrify our own vehicle fleet at home. We had already made a commitment to hybrid vehicle technology—having driven a Toyota Prius for several years. But starting in 2011, we leased a Chevy Volt—a plug-in hybrid vehicle with the capacity to operate as an all-electric vehicle. Even though we were already driving a Prius and reducing our use of fossil fuels, we noticed immediately that electrifying our driving allowed us to greatly reduce even further our use of gasoline and the pollution caused by tailpipe emissions. It was so gratifying to know that we were able to completely eliminate—ELIMINATE the exhaust from our driving—simply by going electric.

Over the past seven years that we have been driving our Volt, we have reduced our fossil fuel pollution by thousands of pounds and saved hundreds—even thousands—of gallons of gasoline—and all the tailpipe emissions that would have resulted from the use of that gasoline. We have saved thousands of dollars not having to buy gasoline by going electric. And charging our Volt at home was relatively inexpensive—we did not notice a spike in our electric bills at all. And studies show that electricity used to charge electric vehicles is much cleaner than the dirty fossil fuels used to power gasoline and diesel powered vehicles—INCLUDING DIESEL POWERED TRUCKS!}

Mark Kraemer
Saving money and reducing pollution in this way has been gratifying to us, but I believe it has had an even bigger effect on public health. Imagine the benefit to the air quality of Illinois if we could electrify ALL the buses in our State—buses that harm our environment and put so much pollution in the air of urban areas throughout Illinois.

We are so excited by the opportunity to use VW settlement funds to significantly increase Illinois' use of electric vehicles because of our own experience electrifying our own vehicle fleet at our own home. It's obvious to us that our success reducing pollution through electric vehicles can be accomplished on an even bigger scale through the VW settlement funds.

It is clear that electric buses run cleaner than even the newer generation of diesel buses. Electric buses are available and ready to hit the road now. All-electric buses are cleaner, healthier and often cheaper than diesel for transit agencies to run in the long-term. Electric buses emit no tailpipe pollution and the electricity they use will increasingly be coming from solar and wind power due to Illinois’ new energy law, meaning electric vehicles will get cleaner as time passes. Increasing our use of electric buses and reducing our use of diesel buses just makes good sense.

Again, I appreciate the opportunity to speak to you about these issues and I hope you will use a much greater portion of the VW settlement for the purchase of electric vehicle infrastructure and electric buses in Illinois. Doing so will maximize the environmental benefits that are possible because of this extraordinary opportunity before us. Thank you very much for the opportunity to speak.
My name is Linda Cole and I reside in Aurora IL. I am a retired RN and the quality of life we are able to provide IL residents is very important to me as it should be to all. You have the opportunity to improve resident’s quality of life by improving the quality of air that they breathe.

Thank you for holding this hearing and giving residents of IL a chance to speak and share their views

The IEPA draft plan includes 10% of the dollars for all electric school buses. This is good, however would be even better if that amt. was increased to 20%. While electric buses cost more up front the yearly maintenance cost per bus is about $12,000 less per year than that of a diesel bus.

There needs to be dollars in the plan for investment in electric vehicle charging infrastructure. The guidelines allow up to 15% of the settlement to be spent on this however the draft plan includes very little if any money to be budgeted for this.

The draft plan plans to spend 20% for on road vehicles by upgrading or replacing trucks and buses and up to 65% toward off road projects, upgrading and replacing locomotive engines, ferries, tugboat by switching out older dirty diesel engines with newer cleaner diesel engines (However still somewhat dirty) We have a choice here to make our air just a little bit cleaner or a lot cleaner by choosing electric vehicles, so I hope that you will choose to improve residents quality of life by improving their quality of air not just a little but a lot by using electric vehicles instead of diesel.

Thank you

Linda A Cole
450 West Downer Unit 5
Aurora IL 60506
630 897 8373 home
630 631 7255 cell
Hello, my name is Gus Fuguitt and I'm here representing Jobs to Move America.

Jobs to Move America is a national non-profit organization committed to ensuring that public dollars spent on infrastructure create good jobs, an inclusive workforce and promote environmental sustainability. Locally, we represent a coalition of dozens of community, environmental and labor organizations that work together to create better outcomes for our communities here in Illinois. Several of our partners are here today and have weighed in on this important issue.

We'd like to thank Illinois EPA for hosting these hearings across the state and allowing stakeholders to participate in these important discussions regarding the Volkswagen settlement money.

Jobs to Move America is here today because we believe the VW settlement funds present a tremendous opportunity to not only invest in new, clean infrastructure for Illinois but also in marginalized workers who face barriers to employment.

We want to see Illinois become a leader in electric bus investment, and we are pleased to hear that the state is considering allocating the funds for that purpose.

Because we strongly believe that our state needs to transition to sustainable and non-polluting transportation sources to create better outcomes for our communities and our shared environment, we also recommend that Illinois uses the maximum 15% of funds for electric vehicle infrastructure.

We encourage IL EPA and any transit agencies that receive VW settlement dollars for electric vehicles to incorporate inclusive public procurement policies like the US Employment Plan to ensure jobs are created, and agencies are held accountable to how that money is spent. A policy like the U.S. Employment Plan could also provide good jobs for workers facing barriers to employment such as women, people of color, veterans, returning citizens, and the long-term unemployed.

Overall, we strongly agree with our partners' recommendations that the state allots the maximum 15% of settlement funds for electric vehicle electrification, and that all other projects be all-electric over clean diesel. The environmental and public health benefits of this approach would be significant, and if paired with policies that promote transparency and the creation and retention of good American jobs, will make Illinois a national leader.
As chairperson of the Illinois Chapter of Sierra Club, I speak for 100,000 members and supporters from across the state. We are desperately in need of leadership from the IEPA for clean transportation and energy use here in Illinois. The VW settlement offers us a perfect opportunity to replace many dirty buses with all-electric vehicles. As a teacher, I witness lines of busses emitting dangerous pollution to lines of children waiting to board the bus every day. The settlement is being offered because of pollution caused by diesel vehicles; therefore improving the fleets of school buses to the absolute maximum possible helps the most vulnerable of our populations.

Additionally diesel buses in urban areas emit dangerous levels of particle pollution to populations who already have disadvantages in health care and are impacted by filthy coal plants and soot. Prioritization of all electric public transportation to these populations mitigates the wrongful effects of diesel caused pollution.

We implore you to not allow the lion’s share of these funds to continue to support old technology such as merely upgrading diesel train engines to newer models. At an absolute minimum, only Tier 3 or Tier 4 certified engines should receive funding if older locomotives are upgraded. Continued reliance on pollution causing fossil fuels for transportation is counterproductive to the efforts Illinois is making in the area of leadership with clean energy thanks to legislation such as the Future Energy Jobs Act.
My name is Richard J Stuckey.

I'd like to thank the ILEPA for providing this opportunity to comment on the draft plan on how the funds that Illinois will receive from the VW Settlement should be spent.

By way of background, I live in Lincoln Park. I have a 2007 Mercedes E320 diesel which was the ultimate in clean diesels at the time I purchased it. It is a wonderful car, but I can’t wait to replace it with a Tesla which I have had on order for a year. I will power my Tesla with electricity from my solar roof, and supplement that with electricity from wind if necessary. I am fully committed to reducing my carbon footprint and providing an example to my friends and neighbors.

I recommend that the ILEPA looks at how the money from the VW settlement is spent, not in terms of the immediate cleaning of the environment that it will produce, but as an opportunity to act as a catalyst for increased investments in clean energy from governments, third parties and individuals.

I hope that NONE of the funds will perpetuate the use of fossil fuels. Clean Diesel is as much an oxymoron as clean coal. It does not exist. Ultra-low Sulphur diesel and the best pollution control devices still result in large amounts of Carbon Dioxide, Nitrogen oxides and particulates.

Your proposed allocation of 20% of the settlement to on-road vehicles is inadequate at a time when China is deploying 9500 all electric buses every 5 weeks. Electric buses are proven technology that reduces costs for fuel and maintenance, and if powered from renewable sources of electricity eliminates climate damaging emissions and leads to a healthy environment. And they improve quality of life in urban environments where Illinois most vulnerable and disproportionately affected residents live.

The vehicles you provide for should be given to organizations that will make a commitment to replace all of their diesel vehicles with 100% electric buses within, say, 5 years.

But why devote only 20% to on-road projects where clean renewable energy solutions are available, but allocate 65% to off-road?

100% renewable solutions do not exist for ferries and tugboats. Where the infrastructure for electric locomotives exists, they are already in use. Conversion of locomotives, ferries and tugboats from filthy diesel to slightly cleaner diesel will produce minor benefits but mostly in places where the air is already clean, far away from where people live. Spending the great majority of the VW settlement funds in off-road projects will continue our shackles to the fossil
fuel industry. I have to ask you: was it lobbying by the fossil fuel industry that caused you to make such a huge allocation of resources to projects that will just continue our dependence on the industry?

My request is that you eliminate or greatly reduce the allocation to off road vehicles so you can allocate more to on-road vehicles which will deliver much greater benefits for the climate and Illinoisans.

Up to 15% of the allocation that you take from off-road projects should go to light-duty electric vehicle charging infrastructure. Many states have allocated a full 15% of their settlement to EV infrastructure. Illinois should do the same. Availability of EV infrastructure will leverage investments in electric vehicles.

10% of the settlement is allocated to replacing diesel school buses. This percentage should also be increased by diverting funds to it from off-road projects. It is essential that the replacements must be all electric and your arrangements with the districts that will get these buses must mandate that they are charged with electricity from 100% renewable sources.

The key points I want to leave you with are:

- Use NONE of the funds to perpetuate the use of fossil fuels
- Spend the money in cities where it will benefit people most, particularly where diesel use most endangers public health.
- Ensure to the extent that you can that all energy used by the projects you fund comes from 100% renewable sources
- Use funds where they will trigger additional investments in clean energy vehicles by getting agreement from those that you give the funds to that they will replace their fleets with 100% clean vehicles at an accelerated rate, and by providing the infrastructure that will encourage people to convert to 100% renewable powered vehicles

Thank you for providing me with the opportunity to share my views on the settlement.

Richard Stuckey
Good morning! Thank you for listening to the speeches and giving us a chance to speak.

My name is Tom and I live in Aurora and very specifically witness this issue. Because I am a member of Seneca Club and a teacher and former member of the adjunct faculty at Buena, I feel sorry students to leave long, healthy, healthy ones well with the future, which means they will grow healthy air to breathe. Our original goal is to reduce our climate damage and the success of this plan would be through spending the maximum amount of 15% for EV infrastructure and a non-expansion amount for new, all-electric infrastructure for all-electric schools. We must become our own self-protecting force.
electric vehicle chargers will encourage sales and hopefully bring down the price of all-electric cars, so that environment-friendly vehicles can be a part of this settlement. This could also help to decrease gas consumption and make energy sources like electric grids more energy efficient. Electric cars may even clean our energy supply, helping to clean our atmosphere. Less electric vehicles will release cleaner city air, and especially the air around our schools, where air pollution can take a serious toll on a student's health.

Mavis Bates
IEPA VW Settlement Proposal
UI Health Comments

- Director Messina and other members of the panel it is a pleasure to be here today and to testify on behalf of the UIC School of Public Health and UI Health.

- As you may be aware UI Health includes a 495 bed acute care hospital, 22 primary and specialty care clinics, Mile Square Health Center (including 12 federally qualified health center locations) and seven health colleges including medicine, nursing, pharmacy, dentistry, applied health sciences, social work and public health.

- While UI health’s roots are in Chicago our scope covers the entire state of IL for example our college of medicine and Pharmacy have campuses in Chicago and Rockford an, and our college of nursing has campuses in Chicago, Rockford, Peoria, the Quad Cities, Springfield and Urbana, and our college of public health is the only school of public health in the state.

- The implementation of the Volkswagen Environmental Mitigation Trust Agreement has the potential to dramatically reduce NOx emissions in the state. IEPA projects NOx emissions could be reduced by 1,800 tons per year with the implementation of specific projects.

- However, the draft plan makes no mention of the potential health impacts that might occur with the implementation of the plan.

- This is a huge oversight because NOx emissions can exacerbate a number of acute and chronic conditions including asthma, chronic obstructive pulmonary disease, myocardial infarction, stroke, and some cancers.

- For many of these health outcomes unfortunately Illinois does not fare as well as its peers. In fact the state is ranked in the lower half of all states for overall health. IL has higher rates of cancer particularly in lung cancer, heart disease and stroke than its counterparts. In fact a CDC report last year showed that Illinois was the only state in the region that saw an increase in stroke mortality. NOx emissions has the potential to impact all of these conditions.

- UIC proposes the implementation of a series of health impact projects to assess the impact of the reduction in NOx on the health and wellbeing of Illinois residents. Such studies would be in line with the settlements goals of improving air quality in Illinois.

- The project would focus on three primary areas:
  - Metropolitan Chicago (Cook, Dupage, Kane, Lake, McHenry, Will and portions of Kendall and Grundy counties)
  - Metro-East/East St. Louis metro (Madison, Monrow and St. Claire Counties).
Rural Counties (Champaign, DeKalb, LaSalle, McLean, Peoria, Sangamon, and Winnebego)

- UIC proposes utilizing data from ambient air quality monitoring and electronic medical records targeting these three IEPA priority areas to correlate the relationship between reductions in NOx emissions and improved health outcomes. Both ER and hospitalization data would be used for the following conditions: asthma, COPD, MI, stroke, and cancer.

- The project will help the state assess the impact of mitigation projects along with determining where to target future resources.

- In addition, these studies would promote IEPA's goal of achieving environmental justice for all communities by examining the correlation between health conditions and underserved communities.

- Each year, UI Health cares for nearly 1300 Illinoisans with cancer, over a third of which are of racial/ethnic minority descent. For communities such as Joliet and Bedford Park, we actually care for the majority of cancers (54% and 50% respectively from 2011-2015).

- It is documented in the scientific literature that NOx exposures are higher in majority minority neighborhoods. In fact, Joliet ranked #11 of 50 worst US metropolitan areas for diesel particulate matter-related lung cancer risk.

- In addition to Cook, UI Health Cancer Center predominantly cares for cancer patients from Will and Grundy counties, both of which have been identified by the EPA as not meeting either the ozone and PM standards, of which diesel emissions are a large contributor.

- UIC has a proven record of environmental research, medical surveillance, screening, diagnosis, treatment and medical legal services as part of the Black Lung Center of Excellence. With leading researchers and groups like the Black Lung Center of Excellence, we have the expertise, reach and credibility to lead large scale health impact studies.

- While UIC would be the hub of this work we would partner with other academic institutions in the implementation of the health impact projects.

- UI Health has committed presence in communities most impacted by NOx exposures. As part of a leading research university, we have a unique position to conduct a health impact study, reaching the populations most impacted by this issue. These are our neighbors, our family members, our patients and so for UI Health, this problem is personal.
TC Energy Group / Free Charging Network

Mission: Accelerate the Adoption of EV.

A massive transportation and energy revolution is upon us, one bigger than the computer and internet revolutions combined. How does Illinois participate and capture this opportunity, one of the biggest revolutions in our lives? Manufacturing, jobs and transfer of wealth is at stake, with Illinois primed to take advantage of this opportunity. Illinois needs to use this money to move towards this future, and not use it to update old technology.

Our vision is install 10,000 level 2 charging stations nationally deployed in 5 years’ time. We intend to do this with strategic partnerships with major corporations seeking to meet sustainability goals. We believe we have a no barriers program to make this happen. All our stations are free to use, which is something we believe is extremely attractive to consumers who think electric transportation is overwhelmingly expensive.

We are an Illinois based company, our stations are manufactured right here in the Chicago area. We currently have 1 global corporate host and 1 global financial institution as a sponsor, BOTH headquartered in Illinois.

We believe that our groups’ goal to accelerate EV adoption would be greatly advanced by receiving funding from the Illinois VW Settlement. The Free Charging Network would like to be considered for funding to help accelerate EV adoption in Illinois. Thank you.
Welcome!
To begin FREE charging, pull the cable out.
Plug into your EV. Charging starts automatically.
Hello, I’m Randall Ray and I represent IC Bus, a division of Navistar – both of which are headquartered here in IL.

First, we want to say thank you hosting this event and the opportunity to hear our voices.

We would like to point out and applaud the recognition of school bus as a mitigation plan priority. Our concern is that source emission areas, on-road NOx emissions; is not matched with on-road reductions. Per ILEPA, 74.8% of all NOx emissions in Illinois are from on-highway sources.

Currently, the draft plan prioritizes off-highway emission reductions as the off-highway sources can be very cost effective – we laud that aspect of the analysis.

It is our opinion that mixing more funds towards the school buses, as an on-highway reduction opportunity, can also be most beneficial.

- According to IHS Polk Registration, there are over 2200 pre-1998 buses, and just under 19,700 pre-2010 buses in the State
- Accelerating the retirement of the older, high NOx producing units in the vicinity of the most at risk population, school children still developing full respiratory capability, will have long term benefits resulting in a healthier population and reduced long term health costs
- Please, be aware the buses that the public rails against – are indeed the exact ones we want to replace with alternative fuel propane or clean diesel.
- When the categories of Eligible Mitigation Actions were determined, EPA acknowledged the benefits and capabilities of these alternative fuel and clean diesel vehicles.
• Yes, we hear the message of getting to ZEV vehicles, and in recognition of that, we at IC have our own electric prototype bus. What we can do today more cost effectively, which means helping more people and more areas – is provide clean burning propane, a US based energy source.
  o The replacement of school buses will help reduce continuing District and State education budget concerns and reduce short term transportation budget needs
    ▪ The availability of private money to assist public institutions represents a unique opportunity to assist our school transportation needs

We have all heard the axiom, don’t let great stand in the way of very good. Clean burning propane engines are assembled by our supplier, here in Illinois. Propane buses are 1/3 the cost of electric.

Environmental justice communities by definition are at risk and underfunded, as such they should not be burdened with being technology test beds, let propane, and clean diesel, deliver benefits now.

A new vehicle will be covered by warranty, thus further reducing the strain on transportation budgets, and that new vehicle will contain all the advancements made in the years since the retiring vehicle age.

Again, our alternative fuel propane engines are built here in Illinois, our Engineering Center, Reliability and Training Center, and Headquarters are all here in Illinois. Our bus dealer, has multiple locations in Illinois and is headquartered here. When you add in the all the on-highway effects – we have 19 bus and truck locations in Illinois.

Can we put these private funds into Illinois companies to help Illinois?
Volkswagen (VW) Settlement Hearing, Illinois Environmental Protection Agency (EPA), James R. Thompson Center Auditorium, 100 West Randolph Street, Chicago, Illinois, Wednesday, May 30, 2018, 6-8 PM.

Good evening! My name is DENNIS R. NELSON, and I reside in Chicago. I am an energy-environmental researcher, writer, speaker, and organizer. IN OUR TOUGH ECONOMIC TIMES, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (EPA) MUST EXERCISE FISCAL RESPONSIBILITY IN USING THE ENTIRE $108 MILLION FROM THE VOLKSWAGEN (VW) SETTLEMENT TO IMPROVE OUR AIR QUALITY AND MOVE "ILLINOIS, THE LAND OF LINCOLN," FORWARD TOWARDS A "ZERO-EMISSION" FUTURE! These funds will provide Illinois with the "green" opportunity (both money-wise and environmentally-wise) to modernize our state's public vehicle fleets and infrastructure, reduce harmful air pollutants, and stimulate sustainable economic development throughout the region. I am very big on attitudes, behavior, and assumptions in solving our environmental and energy problems: THE EPA'S PRESENT DRAFT PLAN MUST REFLECT LONGER-TERM THINKING, AND MUST HAVE THE 'VISION' OF ADVANCING THE TRANSFORMATION OF OUR STATE'S TRANSPORTATION SYSTEM TO A 'ZERO-EMISSION' FUTURE! PLEASE USE ALL OF THE VW SETTLEMENT FUNDS TO MOVE ILLINOIS FORWARD TOWARDS AN INHERENTLY CLEANER, HEALTHIER TRANSPORTATION FUTURE (which will start benefiting Illinoisans right now)! The draft plan must invest better in electric vehicle (EV) charging infrastructure and public transit electrification projects (like electric buses and trains, and charging stations along routes and depots). By doing this, the EPA can "jumpstart" the electric vehicle market (therefore, making EV vehicles more affordable for everybody.) Instead of being diesel- or propane-propelled, school buses must be electric-powered in order to protect the health of our kids and improve our environmental quality. I wish to thank the EPA for the opportunity to speak about this extremely important matter. That concludes my comments!

Dennis R. Nelson

5/30/2018
VeRail Technologies, Inc. Printed Statement on Use of Illinois VW Funds for Metra Locomotives

May 30, 2018 – Chicago, IL

Good Evening. I'm Tom Mack, the President of VeRail Technologies. With me is tonight is Mike Nicoletti, VeRail's Manager of Railroad Operations, and the former Chief Mechanical Officer of the Indiana Harbor Belt Railroad. Mike led the IHB project to drastically reduce their emissions footprint, including Greenhouse Gas (GHG) emissions, by purchasing over 20 dual-fuel natural gas and diesel powered locomotives.

VeRail supports IEPA's decision to use 20% of the VW funds for emissions reduction. Multiple studies have clearly shown that railroad locomotive emissions are the largest source of land-based mobile emissions that have yet to be significantly addressed in the USA. Fortunately, locomotive emissions are actually the most cost effective emissions source to reduce. Hence VeRail believes that IEPA’s decision to use a large percentage of the VW funds to reduce locomotive emissions is clearly a fiscally responsible decision, not simply a political one.

A very unique opportunity now stands before Chicago and the suburbs, along with IEPA. For the first time in history, an established locomotive company is now offering a fully electric battery commuter locomotive repower system capable of repowering current 3,000 to 4,000 HP diesel commuter locomotives to zero-emission operation, with no need for overhead catenary electric wires. These locomotives are perfectly suited for commuter corridors of 40-50 miles one-way, which includes the majority of Metra Routes, including the Chicago to Aurora, Elgin, Joliet, UP, MILW, etc.

While this is VeRail's first public announcement of its commuter locomotive project, the VeRail battery locomotive has been in development for almost a year and is also being deployed in freight locomotive service in Southern California later this year. The development of VeRail's game-changing 3,000 to 4,000 HP commuter locomotive line was actually started due to a request from a west coast commuter agency for a zero-emissions battery commuter locomotive for a 35 mile corridor currently served by 4,000 HP EMD locomotives and Bi-Level commuter cars – almost an exact replica of Metra's commuter corridors served by 150 plus EMD diesel engine powered locomotives pulling BLevel commuter cars.

So while much has been said about using the Volkswagen money to fund cleaner diesel locomotives for Metra, VeRail urges IEPA to consider spending this money on zero-emission battery electric locomotives instead of Tier 4 diesel locomotives.

What Metra Has Expressed:

In 2016, Jim Derwinski, current President of Metra, and at that time Metra's Chief Mechanical Officer (CMO), was extensively quoted in Trains Magazine's 2016 Locomotive Special Issue. In that magazine, Mr. Derwinski outlined several key operations highlights and upgrade requests that keep Metra's fleet operating so efficiently now, and will increase operational effectiveness in the future. These include:

1. Continuing to utilize the existing EMD locomotive fleet due to its reliability and longevity. Mr. Derwinski stated regarding the current 118 Metra EMD F40 locomotives: "When it comes to reliability and longevity [they] get high marks. It's a testament to the design of the locomotive." VeRail will convert these same locomotives to zero-emissions battery locomotives. The proven frames, cabodies, cabs, brake systems, low voltage electric systems, air compressors, and most importantly, the trucks (which are the actual wheel, axle, and traction motor systems that drive the train), will remain the same reliable systems that have served Chicago well.

2. There is one component in the trucks which will be upgraded, but which Metra recognizes is a shortcoming of the current Metra locomotive fleet. Current Metra locomotives use DC traction motors which were designed in the 1950's. While these DC traction motors have served the railroad industry well, with hundreds of thousands if not millions used over the last 50 years, current locomotives use lower maintenance and more energy efficient AC traction motors. Mr. Derwinski is quoted as saying "With the sealed [AC] motors, weather has minimal effect on them. Those things can drive through a snow storm and just keep going." But with the modifications needed for the locomotive carbodies, trucks, and other components, converting existing locomotives to AC was not considered financially feasible. VeRail is happy to let Mr. Derwinski and Metra know that the AC dream is reality in the new VeRail locomotives, and it does not require any modification to the trucks, and the same VeRail solid state components that drive DC traction motors can also drive AC traction motors.

What the public wants

VeRail also believes that zero-emission commuter trains are in-line with what the public wants. For many years the public has asked why commuter railroads are using old dirty diesel locomotives instead of electric locomotives. In a recent Chicago Tribune article, John Walton, chair of Chicago Area Clean Cities, expressed some concerns about use of the VW
funds to fund cleaner diesel locomotives. The article stated that Mr. Walton suspects Metra will receive a large portion of the funding to replace its old diesel engines with newer diesel engines, all from dirty diesel money. VeRail understands how ironic it would be to use "dirty diesel" mitigation funds to fund more dirty diesels, especially since Tier 4 diesel locomotive engines emit about 10 times the emissions of a Tier 4 diesel truck engine!

Additionally, it has been publicly studied and reported that diesel locomotive emissions in the Chicago area commuter stations, and especially in downtown commuter terminus stations, are unhealthy and dangerously high. Simply venting the downtown stations' diesel emissions to the atmosphere through the use of high flow fans does not solve the situation. While the commuter on the ground in Chicago may benefit from the cleaner air on the platform, those diesel emissions are simply wafting into downtown Chicago offices. Worse still, the diesel emissions from these commuter locomotives are also found within the commuter cars themselves, thus adversely affecting the health of commuters. Zero-emissions battery commuter locomotives will produce no emissions to effect commuters or those who work and live near the commuter rail lines and stations.

Cost Effectiveness

Probably the biggest issue seen by many who have looked at IEPA's proposed use of VW funds is whether targeting locomotives is the most fiscally responsible and beneficial use of these funds, VeRail agrees 100% that IEPA is acting wisely and fairly in targeting locomotive emissions.

After extensive research, in March 2018 the Environmental Defense Fund publicly stated that the most cost effective use of the VW settlement funds for emissions reduction would be to repower existing tug boats and locomotives. While much of this study was based on older switcher locomotives that are more polluting per gallon of fuel consumed than a commuter locomotive, the study clearly highlighted how use of VW funds to clean up locomotive emissions is the most productive and fiscally responsible use of these funds. Commuter locomotives use much higher amounts of fuel per year, and each locomotive produce much higher emissions effecting larger population groups.

More importantly to IEPA and the many communities and stakeholders here at this meeting, VeRail can clearly show how zero-emission battery commuter locomotives have now become economically feasible and actually less expensive overall to purchase and operate than Tier 4 diesel powered commuter locomotives now available for Metra. In fact, the cost per ton of NOx removed is actually less expensive for a VeRail zero-emission locomotive than rebuilding a current Metra locomotive to Tier 0+ or Tier 1+ emissions, which VeRail and most air quality groups agree would still produce unacceptable levels of NOx and PM from a commuter locomotive. Thus the concerns of clean air advocates such as Mr. Walton of Clean Cities can be easily addressed – there is no economical need to replace older dirty diesel locomotives with newer cleaner diesel locomotives. It is now just as cost effective, if not cheaper, to replace older diesel commuter locomotives with zero-emission battery powered commuter locomotives.

Advances in battery technology along with drastic battery price reductions brought on by the surge in electric vehicles, means that VeRail zero-emission battery commuter locomotives can right now compete head-on on a dollar for dollar basis with much dirtier Tier 4 diesel. These calculations do not use nebulous and questionable health care cost reduction calculations or quality of life enhancement economics. These are real apples-to-apples comparisons looking at actual money spent to acquire the locomotive and then maintain it, for a 20 year life expectancy. We believe the cost calculations to be simple and understandable to anyone who questions whether Tier 4 diesel or battery locomotives are the best value right now for use of VW funding.

This is a very unique opportunity for IEPA since the VW funds have particularly been targeted to accelerate the adoption of all-electric vehicles. In the past, the adoption of zero-emission electric trains has always required additional funding well beyond that of diesel trains. Funding (and time) is needed for major environmental studies, electrification of the rail lines, and the purchase of new electric locomotives and trainsets. Even in Europe the cost of overhead wire electrification is more and more being seen as a barrier to expanding electrified rail lines. In the U.S. maintenance costs of catenary electrified rail lines is causing some commuter agencies to remove the catenary and return to diesel powered trains. As of today, with VeRail's new option of zero-emission repowering of existing 3,000 to 4,000 HP diesel locomotives to all-electric battery locomotives, this has all changed, and IEPA now has the exciting opportunity to use its VW funds in the most cost effective manner to remove a huge amount of emissions in Chicago and the surrounding suburbs, to the benefit of every man, woman, and child living along, working along, or using the Metra commuter lines.

Climate Change and GHG Reduction

In 2017 when the current federal administration in Washington pulled out of the Paris Climate Agreement, Chicago took the lead in creating the Chicago Climate Charter, a grass-roots initiative by mayors and cities throughout the U.S. and the
world to tackle climate change through the reduction of Greenhouse Gases. While use of the VW funds to buy newer, cleaner diesel commuter locomotives would reduce the NOx and PM emissions, it would do very little to reduce GHG emissions to levels needed in Chicago and the surrounding communities.

On the other hand, a move to zero-emissions battery commuter locomotive would have astounding GHG reduction benefits, thus supporting the Chicago Climate Charter. The VeRail commuter locomotive battery system is designed for locomotives using between 120,000 and 170,000 gallons of diesel per year each. At just 120,000 gallons of diesel fuel displaced each year, a single VeRail locomotive removes almost 1,350 tons of CO2 emissions. That is the equivalent of taking 224 cars off the road. With a 20 year life expectancy for a VeRail locomotive, and a 10 year life expectancy of an automobile, if Metra converted its fleet of about 150 locomotives to zero-emissions VeRail battery locomotives, it would be the equivalent of removing over 67,000 cars from the Chicago area. Another way to look at it, if Metra were to convert to an all-electric battery locomotive fleet, it would be the equivalent of removing a line of bumper-to-bumper cars from the highway that stretched almost 105 miles long—

We therefore encourage the City of Chicago and surrounding suburbs, such as Evanston, Franklin Park, Geneva, Hanover Park, Oak Park, River Forest, and Waukegan that have signed on to the Chicago Climate Charter, to consider how support of the IEPA VW funding of clean commuter locomotives would support their GHG reduction commitments as stated in the Charter. These include commitments to:

Support strong regional, state and federal policies and partnerships, in addition to private sector initiatives, that recognize the fiscal and social costs of carbon, incentivize all actors to take climate action, and ensure a just transition for those impacted by the transition to a new economy;

Partner with scientific and academic experts, community organizations, businesses and investors, environmental justice groups, environmental advocates, and other allies to develop holistic climate mitigation, adaptation, and resilience solutions. [Italics added]
Hello,

Attached please find Healthy Schools Campaign's full statement for the VW hearing yesterday. Thank you for the opportunity to share our thoughts with you on this important matter.

Best,
Kate Yager

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Kate Yager
Director of State Policy + Advocacy

Healthy Schools Campaign
Good evening. My name is Kate Yager and I am the Director of State Policy and Advocacy for Healthy Schools Campaign, a national non-profit organization that works to ensure that all children have access to healthy school environments that enable them to learn and thrive.

Children are particularly vulnerable to air quality hazards, breathing more air per pound of body weight than adults, and diesel school buses present a unique set of dangers for children. Children waiting for, boarding, and riding diesel school buses are continuously exposed to toxic diesel fumes, while school ventilation systems also take in these fumes from idling buses, adversely impacting school teachers and staff, in addition to children.

Exposure to these fumes can trigger and exacerbate childhood asthma. Asthma is a leading cause of school absenteeism, accounting for approximately 14 million absences each school year, or one-third of all school days missed. Children with persistent asthma are three times more likely than their peers to have 10 or more absences each school year, which places them at a greater risk of falling behind academically.

Schools can safeguard children from the harmful effects of diesel school bus pollution by establishing electric school bus fleets. Switching to an electric bus fleet in Illinois would reduce Nitrogen Oxide emissions equivalent to taking nearly 800,000 new cars off the road. In addition, electric school buses maintain lower fuel costs, as well as lower operating and maintenance costs, than diesel school buses.

The high initial purchase price of electric school buses has been the main barrier for school districts in the adoption of electric school bus fleets. The VW settlement provides a unique opportunity to remove this barrier, allowing districts to obtain electric school buses and immediately reduce operational costs.

For these reasons, Healthy Schools Campaign supports IEPA’s minimum 10% set-aside for electric school buses, and views it as an important opportunity for the state to protect the health and welfare of its children while advancing Illinois’ clean energy goals.

Thank you for the opportunity to testify before you today.
Attached for submission are the comments I presented at last night’s public outreach session in Chicago. Thank you for holding these important forums and considering my comments.

Thank you,
Rebecca Judd
My name is Rebecca Judd, and I'm the Clean Energy Advocate for the Illinois Chapter of the Sierra Club, which represents over 100,000 members and supporters across the state. I'm also a resident of the City of Chicago. Thank you for holding these important public outreach sessions and giving me - and other interested citizens - the opportunity to speak today.

Illinois’ receipt of $108 million from the Volkswagen settlement fund is intended to offset or mitigate the harmful nitrogen oxide emissions damage to public health and the environment caused by Volkswagen diesel exhaust vehicles. In 2015, the EPA uncovered illegal devices that allowed certain Volkswagen vehicles to burn lower polluting diesel in testing labs, only to be sold and emit up to 40 times the NOx pollutants allowed in the U.S. once they hit the road. Numerous studies have shown that exposure to dangerous amounts of diesel pollution can cause respiratory disease and worsen existing conditions such as asthma. Diesel exhaust from buses poses a particular public health risk, since buses primarily travel where there are lots of people, including in densely-crowded areas of cities, busy roads, and near schools. In Illinois, nearly 1 of every 8 children live with asthma, but in communities of color, this number is even higher.

These impacts were especially felt this past Memorial Day weekend in the City of Chicago when the National Weather Service issued an unhealthy air quality alert, which means that ozone and particulate pollution was widespread and above the safe levels for sensitive groups of people, such as children and adults with pulmonary and respiratory disease. As a result, such individuals are advised to limit prolonged outdoor activity. It is extremely unfortunate that so many of our fellow citizens have to miss enjoying a beautiful outdoor Memorial Day weekend in Chicago - especially after a long, cold, and rainy Spring - because of air pollution.

Therefore, it is critical that Illinois’ mitigation plan to spend the $108 million Volkswagen settlement funds is made stronger and more robustly allocated toward all-electric transportation projects in order to reduce air pollution and protect and improve the quality of life for Illinois’ most vulnerable and disproportionately affected residents. The VW settlement agreement allows states to set aside up to 15% of funds for light-duty Electric Vehicle charging infrastructure, along with additional funds for other electric transportation projects.

Neighboring states of Ohio, Minnesota, Michigan, and Missouri have all proposed dedicating the full 15% allocation toward light-duty EV charging infrastructure. Other regions of the country
are also investing in electrifying their transportation sector. The Governors of Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming signed a memorandum of understanding to provide a framework for creating a regional electric vehicle plan for the West and electrifying major highway corridors in the region. Eight states in the Northeast and Mid-Atlantic region are also seeking public input as they explore the opportunities and benefits that could be achieved from coordinated state action around a regional clean transportation system.

In comparison however, the Illinois EPA’s proposed plan has dedicated no funds to EV charging infrastructure or public transit electrification projects, such as electric buses and trains and charging stations along routes and depots. The state’s draft plan also focuses too heavily on switching out older, dirty diesel engines for newer diesel engines, which will reduce some exhaust emissions, but still continue our reliance on dirty polluting fossil fuels like diesel, and therefore doesn’t do enough to protect the environment and people’s health over the long term. At a minimum, funds used to replace or upgrade dirty diesel locomotives must result in meeting the tightest EPA-approved pollution limits possible, such as funds only being used toward the purchase of Tier 4 locomotive engines.

The singular highlight of the draft plan is the 10 percent allocation for all-electric school buses, which is a significant step to protecting our children across Illinois. Sierra Club strongly favors this part of the plan, but urge that these buses are kept electric and not diesel or propane.

By committing more funds toward charging stations and all-electric public transit projects, the state can (1) help jumpstart the EV market, which will make EV vehicles more affordable and accessible for all, (2) reduce electricity bills due to downward pressure on rates and more of our electricity being sourced from wind and solar power as a result of the state’s new clean energy law, the Future Energy Jobs Act, and (3) improve air quality for all Illinoisans. In summary, the spending plan needs to be strengthened and allocate more funding toward all-electric projects, including charging infrastructure and public transit electrification projects, so that Illinois doesn’t get left behind from all of the economic, environmental, and public health benefits that come from investing in a clean, carbon-free transportation future.

Thank you for providing the opportunity to speak today and considering my comments.
I want to thank Brad for speaking with me at the VW Mitigation meeting at the Thompson Center last week. Motiv has an advantage in the marketplace for school buses (and other fleet vehicles) as we have more presence than our competitors. We're partnered with body builders like Collins, Starcraft, Thomas, and more. We are tried, true, and cost competitive. Please see the attached letter from Motiv and visit our website for additional info.

If you need help drafting a bid around electric vehicle technology, please let me know. I look forward to seeing the finalized plan and final % allocations. I think it's wise to contribute as much of the settlement funds toward this technology as possible. Be it school buses, para-transit, shuttle buses, utility trucks, public transit, or delivery vans. It is already developed and reliable. It will do the most good if mitigation funds are concentrated on the services that are used by the largest chunk of the population. Buses and delivery vans effect the health and livelihood of the most people, regardless of socioeconomic background. They are the most pervasive vehicles doing the largest share of polluting in the densest areas, and we have an opportunity to greatly reduce their detriment to society. I look forward to working with you, and I look forward to bidding.

Thanks,

Joe Gwin
Sales Representative | Motiv Power Systems

Moved by Motiv
To Illinois EPA:

We would like to support public demand urging that Volkswagen Settlement funds be invested in all-electric zero-emission trucks and buses. This settlement has provided your state with a unique opportunity to improve air quality and the environment, while propelling advanced technology deployment in the transportation industry. As a US based small business and manufacturer, Motiv Power Systems knows first hand how effective energy policy can promote sustainable solutions and clean transportation.

Motiv has developed all-electric vehicle technology, available for a wide range of medium-duty body applications including: walk-in vans, box trucks, school buses, shuttle buses, work trucks, and specialty vehicles. Our technology is approved by Ford and we have partnered with several industry leading organizations to deploy these vehicles in California and New York so far. Heavy-duty commercial vehicles consume considerably more fuel than light duty passenger vehicles, so the environmental benefits of replacing conventionally fueled commercial vehicles with electric vehicles include substantially reduced emissions and improved air quality. Heavy-duty freight trucks disproportionately contribute to pollution and represent less than one-tenth of all vehicles, yet account for roughly 40% of carbon emissions, and this figure continues to grow. Current cutting-edge diesel technologies offer only a 40% reduction in carbon emissions at best, whereas Motiv Power Systems' fleet of electric vehicles can achieve over double that reduction (over an 80% decrease in fuel life-cycle emissions).

In developing a plan to administer Illinois Volkswagen Settlement funds, Motiv urges Illinois EPA to consider California’s successful market based program for commercial vehicles: the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). The HVIP program takes a first-come, first-served approach by encouraging fleets to apply to receive funding for cleaner vehicle technologies. HVIP focuses on medium to heavy duty vehicles. Eligible vehicles include shuttle buses, school buses, work trucks, delivery trucks, and more. This accessible program is easier to administer, customer friendly, and significantly reduces emission pollutants. The HVIP program could be used as a model to administer Illinois EPA Volkswagen settlement funds as it has been proven to lessen the administrative red tape of lengthy grant processes and ease fleet operator’s transition to electric vehicles in turn enabling a simpler, faster solution to poor air quality.

To show how a voucher program can help fleets go electric, we have included a sample total cost of ownership (TCO) model with and without a voucher.

Sincerely,

Joe Gwin
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Note: The image contains a graph comparing the costs of ICE vehicles and EVs over 10 years, with assumptions listed below the table.
The first table and graph illustrates the approximate time a medium-duty EV will break even without a state-provided voucher incentive. The second table and graph shows the same comparison, but accounts for a state-provided voucher incentive of $100,000. This amount is comparable to what California’s HVIP offers fleets today. As you can see, with a $100,000 voucher, the payback period and total cost of ownership becomes significantly more attractive. This will help fleets take the plunge and clean up air in your state!

We hope you will consider our recommendations. We are available to provide more information as needed.
To whom it may concern:

I attended the May 30 Northern Illinois EPA Outreach Session regarding the VW Settlement and would like to add my comments based on what I heard. My background and career have been in municipal finance, and I have a longstanding interest in environmental issues, and so would be happy to contribute my time to helping with the analytical framework by which IEPA is deciding whether and how to amend the proposed allocation of VW settlement money.

My main observation is that the IEPA should decide, or at least better communicate, how it has weighted the importance placed on improving public health relative to reducing GHG emissions in its decision making. The greatest impact on public health will likely be made through investments in electric transportation in densely populated areas, while the largest nominal reductions in GHG will be through updating off roadway diesel engines. A third consideration could be whether the State wants to use a portion of the money to promote transformational technologies that could grow beyond the subsidies. Currently, the allocation appears to be 35% for public health and 65% for projects primarily aimed at GHG reduction. How was this decided?

Second, any analysis, whether of the program or an individual applicant project, should measure reductions over what would happen without investment, not the gains relative to the current outputs. Thus, for each improvement, there needs to be a base case for what would happen in the absence of the subsidy. For example, transit systems may be moving to electric busses in the near future with or without VW settlement money, such that investing settlement money in them achieves little net gain.

Third, in conducting the analysis as outlined above, the base case may look very different for environmental justice communities where technology would have the same immediate impact, but a larger aggregate impact, since these communities are unlikely to be able to afford improvements in the same timeframe as wealthier communities.

Finally, to the extent that municipalities face a funding barrier for up front costs for technologies that are otherwise economic (as in the case of electric busses), the State could consider using some of the money for lending, to be repaid from project savings, thereby creating a revolving pool of money.

Thank you for providing the opportunity to provide input on this potentially transformation money for Illinois.

Regards,
Jamie Rachlin
As the Illinois Environmental Protection Agency (IEPA) is preparing its final Volkswagen Environmental Beneficiary Mitigation Plan, it is our hope that the plan includes school buses.

We are requesting support for the following through the Volkswagen Environmental Beneficiary Mitigation Plan.

- Propane School Buses be included in the Illinois Environmental Protection Agency’s final Volkswagen Beneficiary Mitigation Plan;

- Funding of up to 10 percent (or up to approximately $10,867,968) of the Volkswagen Trust funds allocated to Illinois for the replacement of diesel school buses with propane school buses to meet the purpose of the Trust Agreement and Illinois’ goal to reduce and maximize NOx reductions through investments in alternative fuel vehicles.

- Eligibility for every school district in every county in Illinois, and every private school bus fleet servicing any Illinois school district in any Illinois county be equally eligible for propane school bus rebates. The IEPA’s restrictive designated priority funding zones, under the Agency’s preliminary draft Volkswagen Beneficiary Mitigation Plan, should not apply to propane school bus grantee eligibility;

- The VW Trust funds may be used to reimburse government applicants up to a maximum of 75 percent of the costs, and 50 percent for non-government applicants for the propane school buses.

Thank you for your time and support,

Kathy Anderson
Dean of Instruction
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Charlie,

Thank you for your interest in Illinois’ draft Volkswagen Environmental Settlement Beneficiary Mitigation Plan. As you may know, Illinois has been awarded $108,700,000 from the Volkswagen settlement to reduce harmful NOx emissions. Under the federal court settlement, Illinois may issues grants for propane school buses.

The Illinois Environmental Protection Agency is currently preparing its revised draft VW plan. I have included Brad Frost in this email. Brad is IEPA’s designated Volkswagen Settlement contact.

The Illinois Propane Gas Association has formally requested Illinois’ final VW Beneficiary Mitigation Plan include at least a 10% allocation for propane school buses, and that every school in every county in the state of Illinois be equally eligible for VW grant funding at 75% for public school fleets and 50% for private school bus fleets.

Please feel free to reach out to me or Brad for further information.

Thanks again for your interest in propane school bus grants. This is a great opportunity to transform student transportation air quality by replacing old dirty diesel buses with much cleaner propane buses, and at the same time provide budgetary relief for struggling school districts across the state.

Very Best Regards,

Aaron DeWeese, Executive Director
Illinois Propane Gas Association
From: Charlie Semple
Sent: Wednesday, June 13, 2018 9:23 AM
To: Aaron DeWeese
Subject: Grant for new buses

Please send me the link for the propane bus grant. I am interested in getting more information regarding the grant to replace older diesel powered buses. Thanks Charlie

--
Charlie Semple
Transportation Director
Teutopolis Unit 50 School
801 West Main St
Teutopolis IL 62467
217-857-3715 X2
Fax 217-857-3715

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From: Jim Wurtz  
Sent: Tuesday, June 12, 2018 11:39 AM 
To: Frost, Brad, Armitage, Julie 
Subject: [External] Near Zero Emissions EPA Tier 4 Certified Switcher Locomotives for the VWMTF

Good morning Brad and Julie.

Please note the enclosed information regarding Knoxville Locomotive Works SE Series Near Zero Emissions locomotive switcher product line.

We have several interested clients in the Chicagoland area which would like to leverage the Illinois VWMTF to help facilitate switcher locomotive repowers from unregulated to Tier 4 Near Zero Emissions.

When you have an opportunity, please call me to discuss and we can provide further details.

In the interim, please note the last enclosure from the above exhibits which compares the SE Series emissions performance to the currently established EPA Tier 4 standards.

Best regards,
James M. Wurtz, Jr.
President

Knoxville Locomotive Corporation
Emit Less – Consume Less – Do More
**EPA & ARB Emissions Data Comparisons Series 2000**

**KLW SWITCHER LOCOMOTIVE MODELS**
SE10B T4L NZE@ 1050 BHP  
SE13B T4L NZE@ 1300 BHP  
SE14B T4L NZE@ 1450 BHP  
SE15B T4L NZE@ 1560 BHP

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**Comparative Changes to Tier 4 EPA Standards**
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**Comparative Changes to Tier 4 EPA Standards GP/BHP-HR**
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**Comparative Changes to Tier 4 EPA Standards GP/BHP-HR Switch**

| Tier 4 EPA Emissions Standards | 0.14 | 1.5 | 1.3 | 0.03 | 2.97 |
| Tier 4 K LW Baseline for Switch | 0.02 | 0.01 | 0.2 | 0.02 | 0.25 |
| Percent Change Reduction | -85.71% | -99.33% | -84.62% | -33.33% | -91.58% |

**Comparative Changes to Tier 5 ARB Near Zero Standards Line Haul**

| Tier 5 ARB Near Zero Emission Standards | 0.02 | 1.1 | 0.2 | 0.01 |
| Tier 4 K LW Baseline for Line Haul | 0.01 | 0.01 | 0.25 | 0.014 |
| Percent Change Reduction | -50.00% | -99.09% | 25.00% | 40.00% |

**Comparative Changes to Tier 5 ARB Near Zero Standards Switch**

| Tier 5 ARB Near Zero Emission Standards | 0.02 | 1.1 | 0.2 | 0.01 |
| Tier 4 K LW Baseline for Switch | 0.02 | 0.01 | 0.2 | 0.02 |
| Percent Change Reduction | 0.00% | -99.09% | 0.00% | 100.00% |

**Comparative Changes to Tier 5 ARB Near Zero Standards GP/BHP-HR Line Haul**

| Tier 5 ARB Near Zero Emission Standards | 0.02 | 1.1 | 0.2 | 0.01 | 1.33 |
| Tier 4 K LW Baseline for Line Haul | 0.01 | 0.01 | 0.25 | 0.014 | 0.28 |
| Percent Change Reduction | -50.00% | -99.09% | 25.00% | 40.00% | -78.95% |

**Comparative Changes to Tier 5 ARB Near Zero Standards GP/BHP-HR Switch**

| Tier 5 ARB Near Zero Emission Standards | 0.02 | 1.1 | 0.2 | 0.01 | 1.33 |
| Tier 4 K LW Baseline for Switch | 0.02 | 0.01 | 0.2 | 0.02 | 0.25 |
| Percent Change Reduction | 0.00% | -99.09% | 0.00% | 100.00% | -81.20% |
Tug and Switcher Engine Upgrades Offer Most Cost-Effective Option for VW Funds

New Research Demonstrates the Significant Emission Reduction and Cost-Saving Benefits of Clean Diesel Large Engine Upgrades

March 8, 2018
NEWS RELEASE

(March 8, 2018- WASHINGTON) Clean diesel technology upgrades for large tug and switcher locomotive engines cost only $4,379 to $15,201 per ton of nitrogen oxides (NOx), compared to more than $30,000 per ton of NOx for many other diesel emission reduction projects.

The Diesel Technology Forum (DTF) and the Environmental Defense Fund (EDF) today released a report documenting the significant emission reduction benefits that can be gained by replacing older engines...
in tug boats and switcher locomotives with the latest clean diesel models. Funds from Volkswagen’s (VW) $2.9 billion environmental trust, established to mitigate for the excess emissions resulting from defeat devices on 590,000 diesel vehicles, can be used to help pay the cost of repowering these and other old diesel engines.

The joint research estimates that replacing older engines in a typical tug boat with the latest clean diesel model that meets the latest emissions milestones can eliminate on average 14.9 tons of NOx emissions per year. A similar activity for switchers can reduce NOx emissions by 9.0 tons per year.

DTF and EDF’s research confirms that upgrading tug and switcher engines to the latest clean diesel technology offers the most cost-effective option for reducing diesel emissions. Replacing tugboat engines with clean diesel technology costs on average $4,379 per ton of NOx eliminated, while upgrading a switcher engine costs $15,201 per ton.

“The substantial reductions possible with clean diesel replacements offer great news for communities near ports and rail yards. These areas are often among those most vulnerable to smog-forming compounds like NOx, so residents there stand to reap the greatest benefits,” said Allen Schaeffer, DTF Executive Director. “While engine replacement projects are costly, the return on the investment on a dollar-per-ton of emissions reduced makes these projects a compelling choice. States looking to maximize cost-effective
investments to reduce NOx emissions should prioritize clean diesel upgrades for tug and switcher engines."

"Many tugs and switchers operate in ports that fail to meet federal health-based air quality standards," said Dr. Elena Craft, EDF Senior Health Scientist. "Repowering older tug and switcher engines can deliver cleaner, healthier air faster to at-risk communities near ports. These new engines also help reduce carbon dioxide emissions and black carbon, two important climate pollutants."

Starting in 2015, new clean diesel engines used in marine applications and switcher locomotives in the United States were required to meet Tier 4 emissions standards. Relative to previous generations of technology, the latest clean diesel technologies can reduce emissions, including NOx and fine particle emissions (PM2.5), by 88 percent to 95 percent. While the latest clean diesel technologies are ready and available to reduce emissions, the U.S. Environmental Protection Agency estimates that by 2020, unless action is taken, only 5 percent of the switch locomotive and 3 percent of the marine workboat fleets will be powered by these clean technologies.

"Right now, state governments have an opportunity to get more of these clean technologies out in the field to deliver immediate emission reductions for communities near port operations," said Schaeffer. "The recent settlement with VW established an environmental remediation program that will soon provide $2.9 billion
to states for the sole purpose of reducing NOx emissions. Policymakers looking to reduce emissions quickly for communities near ports and rail lines should consider these highly cost-effective clean diesel solutions."

### Benefit Analysis, NOx Reductions for Large Engines

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<td>Switcher</td>
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Learn more at
https://www.dieselforum.org/largeengineupgrades and
https://www.dieselforum.org/vwfund.

Benefit Analysis, NOx Reductions for Large Engines
Parts & Labor Cost (total) NOx Reduction (tons/year)
Cost Effectiveness Full Cost ($/ton) 40% Cost ($/ton)
Tug $1,400,000 14.9 $4,379 $1,752 Switcher
$2,600,000 9.0 $15,201 $6,080

Source data available here.

Click here for infographics on the pollution benefits of investing in switchers and tug engine upgrades.
The Diesel Technology Forum is a non-profit organization dedicated to raising awareness about the importance of diesel engines, fuel and technology. Forum members are leaders in clean diesel technology and represent the three key elements of the modern clean-diesel system: advanced engines, vehicles and equipment, cleaner diesel fuel and emissions-control systems. For more information, visit www.dieselforum.org. For the latest insights and information from the leaders in clean diesel technology, join us on Facebook, follow us on Twitter @DieselTechForum, or YouTube @DieselTechForum and connect with us on LinkedIn.

Environmental Defense Fund (edf.org), a leading international nonprofit organization, creates transformational solutions to the most serious environmental problems. EDF links science, economics, law and innovative private-sector partnerships. Connect with us on EDF Voices, Twitter and Facebook.
Money flows into New York New Jersey Rail to rebuild and expand the harbor's last carfloat operation

by Bill Stephens

A new Jersey-bound carfloat approaches the Manhattan skyline as a backdrop in September 2017. Until 1964, this railcar ferry service carried thousands of cars across the East River. Today, the harbor's lone remaining carfloat operation, New York New Jersey Rail, plies its trade.

A new 4,000-car carfloat will serve Jersey City and Brooklyn. Donald Hunt, managing director of NYNJ, says, "The idea behind the carfloat is that we can move goods more efficiently from New Jersey to New York and vice versa."

First in the new fleet, a carfloat is due to arrive in a few weeks. The carfloat will allow cargoes to be transferred from railcars to ships without the need for trucks or trucks. The carfloats will operate from Jersey City to Brooklyn, providing a direct link between the two cities.

Donald Hunt, 51, former president of the New Jersey Turnpike Authority, is now managing director of NYNJ. He says, "The carfloats are the future of commerce. They allow us to move cargo efficiently and sustainably."
Far left: The tugboat James E. Brown is tied onto the NYNJ Rail carfloat at the 65th Street float bridge in Brooklyn in August 2017. Left: At Greenville Yard in Jersey City, N.J., a pair of Delaware, Lackawanna & Western Works SE109 switchers shove a cut of Brooklyn-bound cars onto the railroad's carfloat. Two photos, Bill Shapotkin.
Below: NYNJ rail’s Brooklyn-based switches, SE105 No. 5101, pulls a cut of cars off the railroad’s earfst at its 65th Street yard in August 2017. New Jersey Transit’s James E. Bower envisions a loaded earfst to the 65th Street terminal, just west of Beltway, Port Authority of New York and New Jersey. Photo by Ken. The earfst passes within sight of Manhattan on its twice-daily round trips.

scoots across the Upper Bay Bridge spanning Newark Bay, and delivers cars to NYNJ. When NYNJ three-man crews arrive at 5 a.m., they analyze the new day’s tonnage. And then the crew begins a process called “building the boat.” Forget about the traditional railroad rules for blocking traffic by deceleration. This is about distributing tonnage evenly on the earfst’s three tracks. Once the tonnage is mapped out, engineer Dean Lada gets to work. With a pair of 25K’s on his command, Lada shuffles the dock and assembles three cars of cars for the hogs. A “weather car” in this case an NYNJ blue gondola, is used to keep the full weight of the locomotives of the earfst and each bridge. Slowly and statically, each car is moved onto the track until first, then second, and finally the middle track is filled. Hall brakes are applied on every car, and yellow chocks hold the wheels at the end of each car. For all the history in the old dairy bridge — Thomas Edison designed some of its electrical gear, which was mounted on site — no one misses the place. NYNJ General Manager James Carritte says the 430-volt control system would be useless when turned on, sending a shower of sparks raining down like something from Frankenstein’s laboratory.

While NYNJ is busy railroading, the power for your marine to your marina, the highest James E. Bower, arrives on site and sets the earfst. Once the 14 cars are secured, NYNJ conductor Larry Kacira gunks an iron box over the size of a hockey stick. He then retreads four heavy steel pins that hold the earfst level and keep its rails aligned with those on the bridge. Repairs are cut off, and the Brownsville Custer Station can implement turn props that pull the earfst away from the flood bridge. The captain spins the wheel of 140 degrees, pointing you toward the flood bridge. A roundabout route for traffic in and from the Brooklyn, which includes lumber, fly ash, and recyclables such as glass and metal. NYNJ avoids the so-called “Norfolk Southern” and offers shippers to access to Norfolk Southern and its faster, more direct routes to points south and west.

Here important is for NYNJ’s customers to have access to both CSX and NS. “I don’t think it can be overstated,” Bower says. “The whole, the 24-hour business that the NYNJ does is better for this entire area, be it Long Island or Brooklyn or Queens. We’re incredibly underserved compared to the rest of the nation.”

OFF THE FLOAT, INTO THE STREET

About 50 percent of the cars floated to Brooklyn are loaded for local shippers. Another step is to the three-track and transload center at 65th Street, where three lumber companies receive wood and other building supplies. As part of a $37.4 million improvement project, the transload center will be paved and have 2,200 feet of covered dock that will be able to handle refrigerator cars. “I want this to become Hunts Point Meat Market south,” Bower says, referring to the rail-served food and produce market in the Bronx.

A couple times a week, NYNJ loads from 65th Street to the Sims Recycling Solutions center, for new the late tenant in the South Brooklyn Marine Terminal. As if a car float weren’t enough of a chore, the NYNJ has an additional street traffic, NYNJ trains roll right down Fearing Avenue, all the way to Sims at 31st Street. “The last-mile concept is taking on new meaning with us,” Bower says.

Since Fair, South Brooklyn Marine Terminal has received $70 million worth of new additions, and $95 million in other infrastructure improvements, as part of a New York City Economic Development Corp. renovation aimed at attracting new businesses to the waterfront. The NYNJ is likely to benefit. Many new tenants are encouraged to use rail service. Bower figures this could bring 2,000 new loads to the railroad annually. NYNJ has made successful
All Aboard the New High-Efficiency Locomotives
How Texans are Supporting Lower Emissions

Choo Choo! Chevron Phillips Chemical Company is adding sophisticated, high-efficiency locomotives that produce 90 percent less air emissions to its rail operations.

Since Knoxville Locomotive Works in Tennessee debuted the green locomotives in December 2016, Chevron Phillips Chemical has committed to outfitting its domestic polyethylene plants and rail yards with these high-efficiency locomotives by mid-2017.

“Industry is constantly looking for ways to meet state and federal air quality standards,” said Jerry Jarboe, environmental supervisor at Chevron Phillips Chemical’s Baytown facility. “Industry has already made great strides in reducing air emissions over the last decade. Incorporating new technology, such as these high-efficiency locomotives, into our daily operations is just the next step in our already robust environmental practices.”

Switcher Locomotives

These new high-efficiency locomotives are called “switcher locomotives” and are used in rail yards and within small communities as opposed to larger locomotives that travel across the country. Although these new locomotives will not directly transport the expanded polyethylene capacity from the company’s new US Gulf Coast Petrochemicals Project, they are critical to moving product within the plants.

In addition to an air emissions reduction, these trains also reduce fuel consumption compared to similar horsepower locomotives up to 50 percent and provide real-time diagnostics information for operating and maintenance crews.

Locomotives Powered by Texans

These repowered, repurposed locomotives were able to be built thanks to funding from a Texas Emissions Reduction Plan (TERP) grant from the Texas Commission on Environmental Quality, which can help pay for the replacement or repower of old conventional engines into high-efficiency, low-emission engines. TERP is funded by Texans through several dedicated fees and surcharges, including an added fee to title a vehicle, surcharges on sale or use of heavy-duty diesel vehicles and off-road equipment, and fees on the registration and inspection of certain commercial vehicles. TERP funds are then allocated every two years to programs such as these by the Texas Legislature.

“TERP is the single most important tool the state has to achieve meaningful emissions reductions from cars and other mobile sources. Our industry has been strong supporters of TERP and I applaud efforts to extend TERP until the entire state meets attainment,” said Texas Chemical Council President Hector Rivero.
Low emissions locos delivered to Texas

10 Mar 2017

USA: Knoxville Locomotive Works has begun delivering its largest order for low-emissions diesel locomotives.

The Type SE10B and SE15B locos were ordered by Locomotive Solutions for use at chemical plants in Texas, with partial funding from the Texas Emissions Reduction Plan administered by the Texas Commission on Environmental Quality.

The locomotives are expected to reduce fuel consumption by up to 50% and emissions by up to 90% compared to the ones they are replacing, with modern traction control improving haulage capabilities, so that more work can be done with the same or less horsepower.
From KLW, a new breed of repowers

Written by William C. Vantuono, Editor-in-Chief

Knoxville Locomotive Works (KLW) has repowered, refurbished, remanufactured, and/or upgraded more than 400 locomotives since its establishment in 1998. The company’s most recent offering is a fleet of nine SE Series switchers constructed with the assistance of Texas Emissions Reduction Program (TERP) funds.

KLW offers its own line of low-emission, single-engine repowered locomotives, from 1,000 hp four-axle switchers up to 3,200 hp six-axle linehaul locomotives. KLW also offers locomotive rebuilding and refurbishment services for older locomotives.

The project, conducted for Locomotive Solutions of Houston and Baton Rouge, originated from applications submitted under the TERP program, which is administered by a funding department within the TCEQ (Texas Commission on Environmental Quality). TERP is a biennium funding program for obtaining ERIG (Emissions Reduction Incentive Grants). Under the TERP program, Locomotive Solutions was awarded a contract for nine repowered units using KLW’s drive train system, which consists of an MTU Tier 4 engine platform for 1,050 BHP (brake horsepower) and 1,360 BHP engines. The company says that, effectively, 80% of the cost of the top-deck repower is reimbursed through the award of emissions reduction incentive grants.
The nine K LW SE Series switchers, models SE15B and SE10B, are destined for Chevron refineries in the Houston and Beaumont-Port Arthur, Tex., non-attainment areas. The first unit was christened on Friday, Dec. 16.

The K LW SE15B and SE10B are switcher locomotives that are 1,580 BHP and 1,050 BHP respectively. Utilizing four-axle EMD and GE cores, both models weigh up to 276,000 pounds and are fitted with an MTU Series 2000 diesel engine, ZF Friedrichshafen AG reduction gearbox, a TMV Control Systems Inc. Traction and Engine Control Unit (TECU), and other modern technology. “These switcher locomotives are some of the lowest-emitting units ever created and offer superb fuel savings,” the company says. “The SE15B and SE10B models are also the only switcher locomotives in existence to use a high-speed diesel engine with the low-speed AR10 alternator.”

The MTU engines are made in Aiken, S.C. Currently certified to EPA Tier 4i off-highway standards, the 12V and 16V Series 2000 engines offer estimated emissions reductions of up to 90%, making them “excellent solutions for switching in highly populated areas, which is one reason why they qualify for many government-funded emissions-reduction programs,” the company says.

K LW says that, in addition to ultra-low emissions, the SE15B and SE10B reduce fuel consumption by 30-50% compared to similar horsepower locomotives and up to 60% (SE10B) when replacing a higher horsepower locomotive.

“Thanks to improvements in tractive effort. In many operations, this means savings in the tens of thousands of"
dollars or more per year.

The TMV TECU controls the traction alternator, engine speed/power, wheelslip, cooling fans, direction control, automatic engine start-stop (AESS), among other functions. KLW says the TECU is about one-fourth the size of a typical Dash-2 module rack “and as a result features much less wiring than older electronic systems.” A touchscreen is also provided so that operating and maintenance crews can monitor the locomotive’s diagnostics, including faults, in real-time.

One of the key features of TMV’s TECU system is wheelslip control. “By monitoring the traction motors and each axle, the TECU can prevent wheelslips from occurring,” the company says. “This increases the starting tractive effort significantly, up to 40% in certain conditions, compared to older wheelslip control systems. Increasing the starting tractive effort allows the locomotive to do more work than it could before the repower process. Preventing wheelslips and increasing traction also reduces the wear and tear on wheels and on truck.”

“What sets KLW locomotives apart is our unique approach to locomotive repowers,” the company says. “Each KLW model uses a single MTU high-speed engine with a low-speed AR10 traction alternator. This is possible by using a ZF 2:1 reduction gearbox with the MTU engine. The gearbox converts the RPMs from the MTU engine (up to 1,800 RPM) down to a lower speed (up to 900 RPM), making the MTU engine compatible with the AR10. The ZF gearbox is joined to the AR10 with a double-bearing adapter (designed and patented by KLW) and a Geislinger Butterfly or Centa coupling, for higher or lower-horsepower applications, respectively.

“Although the engine and gearbox setup is unique to our product line, KLW actually re-utilises many of the unit’s original components. In addition to the AR10, the trucks, traction motors, wheels, and other items are retained and rebuilt if possible. By retaining common components, the KLW line of locomotives are more familiar to the railroad industry than much of the competition and consequently require minimal training. This approach also reduces costs and makes it easy to find replacement parts.

“KLW is the only single-engine green locomotive manufacturer that offers locomotives from 1,050 hp up to 3,200 hp. As a result, we are able to offer products for operations big or small. For example, many short line and industrial operations have no need for large 3,000-plus horsepower units as they are too big, consume too much fuel, and are overkill for the work that needs to be done. On the other hand, large operations such as Class I switching yards would have no interest in anything under 2,000 or even 3,000 hp, as they need this extra horsepower and size to move large cuts of freight cars. KLW is proud to be the only single-engine manufacturer that offers green locomotives for everyone.”
FACT SHEET

New York & Atlantic Railway and Waste Management of New York Locomotive Repower Project

The Locomotive Repower Project is a partnership between the New York City Department of Sanitation, New York & Atlantic Railway and Waste Management of New York, LLC (“WMNY”) to redesign and repower a conventional freight locomotive with state-of-the-art low-emissions diesel technologies. This project is being made possible with grant funding from the U.S. EPA through the National Clean Diesel Funding Assistance Program, as authorized by the Diesel Emissions Reduction Act (DERA).

The repowered locomotive will be based at the Fresh Pond Rail Yard in Glendale, Queens and will be operated by the New York & Atlantic Railway for service in Queens and Brooklyn. The locomotive will serve approximately 20 local businesses including WMNY’s Varick Avenue truck-to-rail waste transfer station in Williamsburg and Review Avenue truck-to-rail waste transfers station in Long Island City. This repowered locomotive will meet the new, more stringent Tier 4 emission standards set by the U.S. Environmental Protection Agency (USEPA).

Project Description

The project was conceived and approved to replace a single pre-1973 1,200-hp switch locomotive with a mother-slug configuration. A mother-slug locomotive, in simple terms, is a two-part locomotive, one with a diesel engine and traction motors and the other with traction motors only and no diesel engine. The operational advantage of a mother-slug locomotive is to be able to apply more power to the rails in order to start the train from a stop and move it along the tracks - essentially becoming a more efficient method of moving the train cars. Repowering to a low-emission configuration is recognized as an effective means to substantially reduce locomotive emissions and will benefit many New York City neighborhoods including Bushwick and East Williamsburg in Brooklyn’s Community District 1 and Glendale, Middle Village, Ridgewood, Maspeth, Blissville and Long Island City in Queen’s Community districts 2 and 5.

Project Benefits

The Locomotive Repower Project will make New York City’s solid waste management plan more sustainable, lower the locomotive’s fuel consumption, and improve air quality in residential neighborhoods adjacent to the rail line.
This conversion will save an estimated 18,000 gallons of fuel per year and is estimated to reduce emissions by 9.75 tons of nitrogen oxides and 0.22 tons of particulate matter annually.

From a greenhouse gas perspective, the project will avoid the release of approximately 230 tons of CO₂ equivalent on an annual basis.

The Locomotive Repower Project provides direct benefits to the communities of Western Queens and Northern Brooklyn. Both are environmental justice communities where local elected officials are supportive of this project. Repowering locomotives to run on clean diesel will increase the environmental benefits of rail transport.

For more information, contact:

Jim Van Woert
Director of Diversion Strategies
Waste Management of New York, LLC
Email: jvanwoer@wm.com
Port of Stockton to get cleaner locomotives

STOCKTON
August 25, 2017 9:41am

- Air District says new locomotives will be 90 percent cleaner
- "This is a common sense approach to reducing air pollution"

A grant of $1,812,500 is being made by the San Joaquin Valley Air Pollution Control District to the Port of Stockton to help pay for new, clean-burning locomotives.

The funding provided by the Air District will help pay for replacing two old locomotives with the newer Tier 4 engines that are 90 percent cleaner and will reduce an estimated 218 tons of emissions. The Valley Air District says it was also able to secure an additional $3,067,657 from a number of partners including $392,657 from the city of Stockton’s Terminal and Eastern Tax and Metro Ports Use Tax revenues.

Locomotives help move a lot of tonnage in the Port of Stockton, which is the state’s fifth largest in terms of annual tonnage.

“Improving the health and quality of life in disadvantaged communities such as around the Port of Stockton is important,” says Stockton City Councilmember and Valley Air District Governing Board Member Christina Fugazi. “This project is a major step in our efforts throughout the Valley to improve public health through financial incentives to reduce pollution.”

“This is a common sense approach to reducing air pollution while also helping the community retain jobs and build the economy without imposing draconian regulations,” says San Joaquin County Supervisor and Valley Air District Governing Board Member Bob...
Elliott.

The first project, a partnership with Omni Trax Inc., will replace one pre-model year 1973 non-regulated and unmodified 1963 built diesel switch locomotive with a new Tier 4 Knoxville Locomotive Works T4L four-axle diesel switcher. The replacement locomotive will be a single-engine EPA Tier 4 certified and ARB verified switcher locomotive. The new locomotive is more than 90 percent cleaner than the existing, high-polluting locomotive it is replacing.

The existing Switcher is used within the Stockton Terminal and Eastern Rail Yard in Stockton and throughout 10 miles of track, eight miles of which are through residential neighborhoods within the city of Stockton and two miles through commercial and residential zoned areas. The Valley Air District is funding slightly less than 50 percent of the total cost.

The second project, a partnership with the Metropolitan Stevedore Company, will replace one non-regulated and unmodified 1984 built GE C30-7 six-axle diesel line-haul locomotive with a new Tier 4 Knoxville Locomotive Works six-axle diesel line-haul locomotive. The replacement locomotive will be a single-engine EPA Tier 4 certified and ARB verified line-haul locomotive.

This locomotive operates within the Port of Stockton property. The Valley Air District is funding approximately 30 percent of the total cost.
Grant for Stockton Terminal and Eastern KLW T4 locomotive

Written by Stuart Chirls, Senior Editor

The Stockton Terminal and Eastern Railroad was awarded a grant by a clean-air body for the purchase of a new diesel-electric locomotive.

The new locomotive is a KLW SE10B T4L unit built by Knoxville Locomotive Works in Knoxville, Tenn. The engine is EPA Tier-4 compliant delivering 1050 HP from an MTU 2000 V12 prime mover.

Under the grant program, the San Joaquin Valley Unified Air Pollution Central District (UAPCD) is
providing cash incentives for the purchase of the new environment-friendly locomotive, which will be purchased by the end of 2018, for use within the district.

The STE, a unit of OmniTRAX, operates 25 miles of track connecting with BNSF Railway, Union Pacific Railroad, and the Central California Traction Company in San Joaquin County, Calif.

"We appreciate the partnership with the San Joaquin Valley Unified Air Pollution Control District and the effort they are making to provide incentives to area businesses supporting their vision of improving the quality of life in the communities it serves," said Kevin Shuba, Chief Executive of OmniTRAX, based in Denver. "These public-private relationships drive mutually beneficial activities that can dramatically improve our society,"

The grant is part of the UAPCD’s Locomotive Program, which provides incentive funds for the replacement of older locomotives with new, energy efficient models. It is one of several voluntary incentive programs targeted at reducing emissions throughout the Valley that the District administers.

"The District is committed to bringing significant incentive dollars to the Valley, especially in disadvantaged communities such as those around the Stockton Rail Terminal and Eastern Railroad. These are the types of private/public partnerships that are vital in improving air quality and public health throughout the Valley," said Seyed Sadredin, Executive Director/APCO of the San Joaquin Valley Unified Air Pollution Control Central District.

Categories: Freight, Locomotives, Mechanical, News, Short Lines & Regionals
Tags: Breaking News, EPA Tier 4 emissions standards, Knoxville Locomotive Works, Omnitrax, Stockton Terminal and Eastern

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ROLLS-ROYCE TO DELIVER MTU ENGINES TO KNOXVILLE LOCOMOTIVE WORKS TO POWER TIER 4 LOCOMOTIVES

Feb 27, 2018

- New K LW configuration achieves EPA Tier 4 emissions compliance and sets the gold standard for switcher and road-switcher diesel locomotives

- Engines to deliver a power output of 1,050 to 3,218 horsepower (783 – 2,400 kW)

NOVI, MICH., U.S.A. – Rolls-Royce will deliver MTU Series 4000 and Series 2000 engines to Knoxville Locomotive Works (K LW), an original equipment manufacturer of switcher and road-switcher diesel locomotives. The Series 4000 and Series 2000 MTU engines will power K LW’s SE Series four- and six-axle locomotive designs, which were recently awarded EPA Tier 4 emissions certifications. The engines are produced at the MTU America facility in Aiken, South Carolina.

Jim Wurtz, president of Knoxville Locomotive Corporation, said: "Each K LW model uses a single engine drive train system consisting of either an MTU Series 4000 or Series 2000 high-speed engine powering a traditional intermediate speed AR-10 Series
alternator. KLW chose MTU for its worldwide experience in developing highly reliable and clean diesel engines. MTU engines are ideal for the application demands of switching and road-switching operations. We share a commitment together to lead the marketplace in reliable and cost effective locomotive solutions across a broad spectrum of horsepower classifications for Tier 4 and beyond."

KLW is the only freight diesel locomotive manufacturer to achieve Tier 4 switch and line-haul certifications with single-engine prime-movers rated at 1,050 to 3,218 horsepower (783 – 2,400 kW).

MTU Series 4000 and Series 2000 engines for rail applications feature very low exhaust emissions combined with low fuel consumption. The engines used by KLW comply with EPA Tier 3 emission regulations with no aftertreatment and require only minimal exhaust gas aftertreatment for compliance with the EPA Tier 4 limits. As a result of these technological prerequisites, the consumption of DEF (Diesel Exhaust Fluid) for further nitrogen oxide reduction is correspondingly low. The consumption for MTU’s Series 4000 and Series 2000 engines, for example, is less than 2.5 percent per gallon of diesel fuel, whereas other engines in the marketplace require 6 to 8 percent in order to meet EPA Tier 4 levels.

Michael Byrne, manager of rail sales for the Americas at MTU America, said: "KLW’s robust network within the North American rail industry and its decision to commit to and invest in obtaining EPA certification makes the company one of the fastest growing locomotive builders in the industry. MTU is proud to be part of its Tier 4 solution and congratulates KLW on this significant industry milestone."

**MTU Series 4000 and MTU Series 2000**

MTU’s Series 4000 and Series 2000 products are high-speed engines with up to 1,800 RPM. Series 4000 engines are available in 12V (2,012 – 2,414 bhp), 16V (2,682 – 3,218 bhp) and 20V configurations (3,621 – 4,425 bhp). MTU Series 2000 engines are available in 12V (1,050 bhp) and 16V (1,300 – 1,560 bhp) for rail applications.

Versions of MTU Series 4000 and Series 2000 are the only single engine prime movers in these horsepower classes to meet EPA Tier 3 standards for switcher locomotives without aftertreatment and continue MTU’s long tradition of offering systems expertise and established drive solutions from a single source.

MTU’s rail engines are backed by billions of miles of service in the field and more than 90 years of experience. The Series 4000 engine has been installed in over 2,400
MTU will deliver Series 4000 and Series 2000 engines to Knoxville Locomotive Works (KLW) to power KLW’s SE Series four and six axle locomotive designs, which were recently awarded EPA Tier 4 emissions certifications.

MTU’s Series 4000 engines have been installed in over 2,400 locomotives around the globe and are commonly used in other demanding industries that require optimum power-to-weight ratios and reliability, with over 39,000 units produced to date.

Jennifer Riley
Spokeswoman North- and Latin America
+1 248 560 8488
Jennifer.riley@mtu-online.com
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KLW is Only Freight Locomotive Manufacturer to Achieve EPA Tier 4 Certifications for Switch and Line Haul Duty Cycles

PRESS RELEASE  UPDATED: AUG 22, 2017 09:38 EDT

Knoxville, Tennessee, August 22, 2017 (Newswire.com) - Knoxville Locomotive Works (KLW), an original equipment manufacturer of switcher and road-switcher locomotives, was recently awarded EPA Tier 4 emissions certifications for its SE Series four and six axle locomotive designs.

The Tier 4 certifications include the switch duty cycle for KLW models rated at 2000, 2200 and 2300 bhp and the line haul duty cycle for KLW models rated at 2400 through 3200 bhp. KLW is the only freight locomotive manufacturer to have achieved Tier 4 switch and line haul certifications in this broad range of horsepower classifications with single engine prime movers.

"KLW's strategy was to assimilate a team of industry experts and supplier resources capable of advancing to the stringent requirements of Tier 4 locomotive air quality standards. These locomotives use DEF at a rate of less than 2.5% per gallon of diesel fuel while delivering significantly improved fuel savings and tractive effort versus their conventional locomotive counterparts," said Knoxville Locomotive Works' Chairman Pete Claussen.

Media Contact:

James Wurtz

Phone: 865-804-4383

Email: jmw@goklw.com

Source: Knoxville Locomotive Works, Inc.
Categories: Transportation and Logistics, Environmental, Rail Roads, Shipping
Tags: EPA Certified, freight switcher locomotive, locomotive, low emissions, switcher, tier 4, vw freight switcher locomotive

Additional Images

Related Files

August 2017 Tier 4 Final Announcement

Additional Links

Website

About Knoxville Locomotive Works

View Website
Knoxville Locomotive Works (KLW) has repowered, refurbished, remanufactured, and/or upgraded over 400 locomotives since its establishment in 1998. Today, KLW offers its own line of green, single-engine, repowered locomotives.
From: Jon-Keith Evans
Sent: Tuesday, April 10, 2018 4:59 PM
To: Frost, Brad
Cc: 
Subject: [External] Volkswagen Dieselgate Settlement Inquiry

Mr. Frost:

I just learned, via WGN-TV that there was a settlement from Volkswagen in regard to the Dieselgate Scandal. The State of Illinois, according to the report, is entertaining ideas for the use of the money from the settlement.

I have one"

I would like to see THREE Alternative Fuel Depots on each side of Chicago at the following possible venues:

1. South-The Commonwealth Edison Solar Farm at or around 120th and Morgan Streets just to the northwest of the Metra Electric West Pullman commuter train station. This site would have shuttles from Morgan to the West Pullman Station.
2. West-The site of the old Pheoll Manufacturing Company, or the site of the old Alden’s mail order catalog house-depending on which parcels of land is lying fallow.
3. North-The Edgebrook Woods area near, or around Devon and Caldwell Avenue

Each of these sites would be equipped with facilities for Alternative Fuel Vehicles, such as NAT-GAS; Biodiesel; E-95; E-85; Hydrogen; Propane; and DEDICATED Battery/Electric Vehicle Charging Stations.

Each of the Alternative Fuel Depots would also have an ANCHOR store such as a Meijer, a Target, or even AN AMAZON PICK-UP OUTLET!

Would you be the proper person to submit my proposal?

If not, Who is?

Jon K. Evans

Sent from Mail for Windows 10
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Brad,

We are in the process of replacing our fleet with propane buses. Can you please tell me if there is grant money available for this purpose and how to access it? Roger

--
Dr. Roger Alvey
Superintendent
Illini Bluffs CUSD #327

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I want to thank Brad for speaking with me at the VW Mitigation meeting at the Thompson Center last week. Motiv has an advantage in the marketplace for school buses (and other fleet vehicles) as we have more presence than our competitors. We’re partnered with body builders like Collins, Starcraft, Thomas, and more. We are tried, true, and cost competitive. Please see the attached letter from Motiv and visit our website for additional info.

If you need help drafting a bid around electric vehicle technology, please let me know. I look forward to seeing the finalized plan and final % allocations. I think it’s wise to contribute as much of the settlement funds toward this technology as possible. Be it school buses, para-transit, shuttle buses, utility trucks, public transit, or delivery vans. It is already developed and reliable. It will do the most good if mitigation funds are concentrated on the services that are used by the largest chunk of the population. Buses and delivery vans affect the health and livelihood of the most people, regardless of socioeconomic background. They are the most pervasive vehicles doing the largest share of polluting in the densest areas, and we have an opportunity to greatly reduce their detriment to society. I look forward to working with you, and I look forward to bidding.

Thanks,

Joe Gwin
Sales Representative | Motiv Power Systems

Moved by Motiv

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Good Afternoon Brad,
This is such good news to read!!
I would like to know more about the steps needed for our district to benefit from the VW mitigation funds.
We have purchased 15 new propane buses to be delivered this July, with the decision to continue to grow our propane fleet for school year 19-20.
We have many of those “old diesel buses” and would like to get them replaced.
Sincerely,
Diana Mikelski

Diana Mikelski
Director of Transportation
Township High School District 211

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Hello Brad,

Hope you are well. I had a quick question: has EV Infrastructure been considered as part of your plan? Many surrounding states have opted for the full 15%, I wondered what IL's plans were.

Best,

Matthew

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How do we apply for this grant?

Thanks,

Kyle M. Hacke, Assistant Superintendent
Hillsboro CUSD #3

The Hillsboro Community School District fosters a student-centered culture with high expectations for each student to reach his or her full potential.

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Mr. Frost,
I am writing regarding the use of the VW settlement funds in Illinois. I was unable to attend one of the public hearings, and hope it’s not too late to provide input for your consideration.

The draft plan prioritized certain vehicles disproportionately, and I hope that the final plan will spread the settlement funds in proportion to the size of each fleet and pollution generated. For example, school buses and train engines, while important to clean up, should not receive outsized portions of the settlement funds. Municipal fleets and buses should be included at amounts that are proportional to the number of vehicles on the road and the pollution they emit.

I serve on the City Council in Highland Park. The views I express are my own, and I am not writing on behalf of the City. As a Council member, I have experienced the difficult task of balancing budgets and have seen that we often cannot purchase cleaner, more efficient or alternative fuel vehicles in our fleet due to the upfront cost difference. It would be helpful if there were incentives to help clean up municipal fleets, and that should be a part of the VW settlement plan. In addition, I have spoken with Pace about transitioning to a cleaner bus fleet in our area. Lake County gets an F for air quality from the American Lung Association. While electric buses have lower operating and maintenance costs, Pace’s financial challenges make it difficult to pay the upfront cost to purchase these cleaner buses. Pace serves the entire metropolitan area, so transitioning to cleaner buses in their fleet would have a tremendous impact on air quality in our region.

Spreading the settlement money proportionately would enable transit agencies, municipalities, and others to begin the transition to cleaner vehicles. This would provide "seed money" to begin reaping the benefits of cleaner vehicles in each fleet, so that managers could choose cleaner vehicles as prices decline.

Thank you for taking my comments into consideration, and for hearing the public as you develop this important plan.

Kim Stone

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Brad,

Boone County had representatives attend the May 30 Session in Chicago. At this session I spoke on behalf of Boone County providing additional information on our county as it relates to the criteria in the BMP in an attempt to be included into a Priority Area. Boone County is very interested in the program and would like a status update or feedback on our County’s position in the process before the BMP leaves the draft state.

Thank you,
Justin D. Krohn, P.E.
Boone County Engineer

---

Mr. Krohn,

We are still reviewing the comments that have been submitted and will need to consider the comments that we hear at the outreach sessions prior to finalizing the BMP.

Brad

Brad Frost
Manager, Office of Community Relations

Follow us

---

Brad,

---
The Boone County Board has a meeting on May 16th. We were hoping to hear back on the submitted document regarding the reevaluation of Boone County as a Priority Area. Is there an update to the status of the review of our supplied documents?

Thank you,
Justin D. Krohn, P.E.
Boone County Engineer

From: Frost, Brad
Sent: Friday, May 11, 2018 4:22 PM
To: EPA.VWSettlement
Subject: Illinois EPA VW Outreach Sessions

The Illinois EPA will host three public outreach sessions on its draft Beneficiary Mitigation Plan to use the state's $108 million allocation from the Volkswagen Settlement. Agency representatives will give an overview of the Settlement and draft BMP, and answer questions and accept public input from attendees.

Public Outreach Sessions will be held in the evening from 6:00 - 8:00 p.m. at the following locations:

Wednesday, May 23, 2018
Illinois EPA Headquarters (North Entrance)
Sangamo Conference Room
1000 East Converse
Springfield

Thursday, May 24, 2018
St. Paul Baptist Church
1500 Bond Avenue
East. St. Louis

Wednesday, May 30, 2018
James R. Thompson Center Auditorium
100 West Randolph
Chicago

If you have questions about the outreach sessions or Illinois' draft BMP, please contact me.

Brad Frost
Manager, Office of Community Relations

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including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.
Hi Brad,

Our district is interested in the School Bus Grant. Please send me information about how to apply for the grant.

We will apply for 5 big busses (72 passenger), 3 mini busses, and 1 wheelchair bus if that is permitted.

Thank you.

Laura Anderson, Ed. D.
Concord Elementary School Principal
Cass School District 63 Director of Teaching and Learning

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Cass School District 63, DuPage County, Illinois, United States of America
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Good Morning Brad,

I believe I completed a preliminary application for this grant, but I want to make sure my request is submitted.

- Propane School Buses be included in the Illinois Environmental Protection Agency’s final Volkswagen Beneficiary Mitigation Plan;

- Funding of up to 10 percent (or up to approximately $10,867,968) of the Volkswagen Trust funds allocated to Illinois for the replacement of diesel school buses with propane school buses to meet the purpose of the Trust Agreement and Illinois’ goal to reduce and maximize NOx reductions through investments in alternative fuel vehicles.

- Eligibility for every school district in every county in Illinois, and every private school bus fleet servicing any Illinois school district in any Illinois county be equally eligible for propane school bus rebates. The IEPA’s restrictive designated priority funding zones, under the Agency’s preliminary draft Volkswagen Beneficiary Mitigation Plan, should not apply to propane school bus grantee eligibility;

- The VW Trust funds may be used to reimburse government applicants up to a maximum of 75 percent of the costs, and 50 percent for non-government applicants for the propane school buses.

Please inform me if you need any other information.

--
Fred Lamkey
Edinburg CUSD 4
Hello Sir,

Hello Mr. Frost,
I have read the attached document and we are looking at the possibility of replacing our old fleet with a new fleet. Is there anything that I need to do on my end to insure that this grant goes through?

Contact the Illinois Environmental Protection Agency Today

Request Grants for New School Buses

Does your school need new buses? New grant money may be available for the purchase of new alternative fuel school buses. The Illinois Environmental Protection Agency (IEPA) is preparing its final Volkswagen Environmental Beneficiary Mitigation Plan, a $108,700,000 grant program for alternative fuel vehicles, including school buses, to reduce harmful NOx emissions.

One proposal being considered by the Illinois Environmental Protection Agency is grant funding for propane school bus, which are eligible for funding under the terms of Volkswagen’s environmental mitigation settlement.

There is a general consensus amongst health and community organizations, school administrators, environmental advocacy groups, and state legislators, that reducing student transportation NOx emissions should be a very high priority. The problem is very real. Currently more than 10,000,000 old diesel school buses are in service in Illinois – each diesel school bus emitting over 1,110 pounds of harmful NOx emissions each year directly around students. NOx emissions are extremely harmful for young developing lungs.
Propane school buses are much cleaner than diesel school buses. Propane school buses reduce harmful NOx emissions by more than 81% compared to diesel buses. There are more than 800 propane school buses serving more than 40 schools in Illinois.
The time is now. Contact the Illinois Environmental Protection Agency:

Brad Frost
Illinois Environmental Protection Agency
[Redacted]

Please request support for:

- Propane School Buses be included in the Illinois Environmental Protection Agency’s final Volkswagen Beneficiary Mitigation Plan;

- Funding of up to 10 percent (or up to approximately $10,867,968) of the Volkswagen Trust funds allocated to Illinois for the replacement of diesel school buses with propane school buses to meet the purpose of the Trust Agreement and Illinois’ goal to reduce and maximize NOx reductions through investments in alternative fuel vehicles.

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- The VW Trust funds may be used to reimburse government applicants up to a maximum of 75 percent of the costs, and 50 percent for non-government applicants for the propane school buses.

Please contact the Illinois Propane Gas Association 217-525-8000 for more information.

Aaron DeWeese, Executive Director
Illinois Propane Gas Association
[Redacted]
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Thank you. It appears that propane buses are not a priority, but electric buses are? I was not aware that electric school buses existed. Roger

On Fri, Jun 22, 2018, 2:27 PM Frost, Brad wrote:

Dr. Alvey,

I believe that you are referring to the funding from the VW Settlement of which the Illinois EPA will be directing the allocation for Illinois. We have established a website to provide information about the Settlement and Illinois’ plan
http://www.epa.illinois.gov/topics/air-quality/vw-settlement/index

We are still reviewing comments from our public comment period after which Illinois EPA will submit a final BMP to the Trust.

After you have read through the documents, if you have any questions, please let me know.

Brad Frost
Manager, Office of Community Relations
From: Roger Alvey  
Sent: Thursday, June 14, 2018 10:55 PM  
To: Frost, Brad  
Subject: [External] propane buses

Brad,

We are in the process of replacing our fleet with propane buses. Can you please tell me if there is grant money available for this purpose and how to access it? Roger

--

Dr. Roger Alvey  
Superintendent  
Illini Bluffs CUSD #327

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From: Frost, Brad
Sent: Thursday, July 12, 2018 1:49 PM
To: EPA.VWSettlement
Subject: FW: Volkswagen Settlement

From: Tadd Varney [redacted]
Sent: Thursday, July 12, 2018 11:19 AM
To: Frost, Brad [redacted]; Shelly Cassaro [redacted]; Matt Zinke [redacted]
Cc: [redacted]
Subject: [External] Volkswagen Settlement

Brad,

Pleasure speaking with you today and we look forward working with on this matter.

We will review the draft plan on the website once we receive the website link.

Regards,

TADD VARNEY | ASSISTANT FACILITIES AND MAINTENANCE MANAGER

GREATER ROCKFORD AIRPORT AUTHORITY
CHICAGO ROCKFORD INTERNATIONAL AIRPORT (RFD) | IL 61104

NON-STOP JET SERVICE TO NINE WORLD CLASS DESTINATIONS | CANCUN | FT. MYERS | JAMAICA | LAS VEGAS | ORLANDO | PHOENIX | PUNTA CANA | TAMPA BAY

STAY CONNECTED WITH RFD via FACEBOOK | TWITTER | LINKEDIN | MILES AHEAD

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From: Messina, Alec  
Sent: Thursday, June 28, 2018 2:21 PM  
To: Frost, Brad
Subject: FW: [External] Letter Regarding the VW Settlement Plan

For your records

From: Tom Morrison  
Sent: Wednesday, June 27, 2018 4:05 PM  
To: Messina, Alec
Subject: [External] Letter Regarding the VW Settlement Plan

Director Messina,

Please see the attached letter.

Thank you.

Tom Morrison

State Representative Tom Morrison - 54th
District Office:

Like us on Facebook! "State Representative Tom Morrison"

Capitol Office:

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June 27, 2018

Director Alec Messina
Illinois Environmental Protection Agency
1021 N Grand Avenue East
P.O. Box 19276
Springfield, IL 62794

Dear Director Messina,

Our local high school, Palatine High School, is planning to invest in propane school buses, and I am requesting that the IEPA’s final VW Beneficiary Mitigation Plan include a designated allocation for propane school buses.

In detail, I ask that the same allocation amount and terms be made for propane school buses as the Illinois EPA designated for electric school buses under the terms of IEPA’s draft Volkswagen Mitigation Plan — specifically, up to 10 percent or up to approximately $10,867,968 of the Volkswagen Trust funds. I also ask that the same grant applicant matching fund terms be set for propane school buses as the IEPA set for electric school buses. Under IEPA’s draft VW plan terms for electric school buses, public school bus fleets may be reimbursed up to a maximum of 75 percent of the costs and 50 percent for private bus fleets and non-government applicants. Finally, I ask that you allow every school district in every county in the state of Illinois to be equally eligible for VW Settlement funding for propane school buses grants clearly stated in the final terms of IEPA’s final Volkswagen Mitigation Plan.

Thank you for your time and consideration.

Sincerely,

Tom Morrison, State Representative
54th District
From: Wayne Gromadzki
Sent: Thursday, July 19, 2018 9:59 AM
To: Frost, Brad
Cc: Jerry Kane, Phil Roggio
Subject: [External] Information Regarding VW Environmental Mitigation Trust Fund

Mr. Frost,

Thank you for taking time this morning to speak with me regarding participation in the Volkswagen Environmental Trust as applicable to the State of Illinois. Pursuant to our conversation we operate Mass Transit in Madison County Illinois which is listed as Priority Area 2 — Metro-East St. Louis Non-Attainment Area. I would like to provide you my e-mail address along with those of our Executive Director and that of our Capital Projects Coordinator so your office can keep us updated regarding information updates, deadlines, processes and applications applicable to our participation. During our conversation you mentioned that currently a DRAFT PLAN is in place but the PLAN has not been finalized. **QUESTION:** Would our Project need to be included in the PLAN before it is FINALIZED? If so, what would be needed on our part to be included? Also, if there is any other information that could offer assistance regarding this matter please feel free to forward it accordingly. Again, that you for your time today.

**Madison County Transit, E-Mail Contacts:**

Jerry Kane, Executive Director
e-mail:

Phil Roggio, Capital Projects Coordinator
e-mail:

Wayne Gromadzki, Special Projects Coordinator
e-mail:

Regards,
Wayne Gromadzki, Special Projects Coordinator
Madison County Transit
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From: Mohr, Kent
Sent: Tuesday, July 31, 2018 3:22 PM
To: Frost, Brad <Brad.Frost@Illinois.gov>
Subject: FW: Orange EV

Additional comments...

Kent E. Mohr Jr., Esq.
Manager, Mobile Source Program
Illinois Environmental Protection Agency

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From: Jason Dake
Sent: Friday, July 13, 2018 4:33 PM
To: Mohr, Kent <Kent.Mohr@Illinois.gov>
Subject: [External] Orange EV

Kent,

My name is Jason Dake and I got your information from Mike Saxton, here at Orange EV. I am now picking up a lot of the regulatory activities (incl. VW funds) for Orange EV.

As such, I was going through the IL mitigation plan for VW and I noticed that terminal tractors were not included as a mitigation action for off-road use. Was this an intentional oversight, or was it anticipated that they would be included in the Class 8 local freight category (regardless of registration)?

Also, if you had some time, we are looking at some projects in IL that might present good mitigation opportunities, if the funding were available and I would like to speak to you about these potential projects.
Thank you and have a good weekend.

Jason Dake
Vice President, Legal and Regulatory Affairs
Orange EV LLC

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Subject: Comments on Illinois Volkswagen Beneficiary Mitigation Plan

Orange EV would like to provide you some information relating to the treatment of terminal tractors within the Illinois Volkswagen Beneficiary Mitigation Plan (VW BMP).

Orange EV is the only Class 8 fully electric vehicle that operating commercially. In October, we have operated commercially for 3 years and have documented almost 200,000 hours of usage in commercial operation.

In addition, terminal tractors are one of the highest NOx emission producers of wheeled vehicles. For example, a terminal tractor on average runs around 3300 hours per year (we have customers that are using their terminal tractor more than 5000 hrs./year), while an average class 8 local freight truck averages around 60,000 miles per year. Utilizing the EPA Diesel Emission Quantifier an average terminal tractor produces over double the NOx of an average local freight Class 8 truck. In addition, terminal tractors are often located in non-attainment areas and the emission reduction developments for diesel engines are ineffective due to their usage profile and lower top speed (approx. 25 MPH). As such, an Orange EV terminal tractor creates greater NOx reduction as it reduces emissions by 100% while Class 8 Local Freight trucks have no electric alternative, so any reduction recognized by utilizing alternative fuel will result in a lesser percentage than electric.

With these facts in mind, Orange EV would like to propose some overarching concepts that should be reflected in the VW BMP:

- Terminal tractors should be included in the VW BMP wherever they are deployed;
- The type of vehicle being included in the program is irrelevant, so long as the same or substantially the same activity is being performed by the replacing vehicle; and

The detailed comments/explanation are as follows:

Terminal Tractors

Suggestion: The VW BMP should allow for the inclusion of terminal tractors in any location in which they are utilized.

Terminal tractors are utilized in various locations and industries and the greatest usage is in distribution and warehouse centers. For example, our research has shown that only a small percent, usually around 5% of the total terminal tractor population, operate in ports and railroads, the remainder operate in warehouse and distribution centers. As such, to reach the largest population of terminal tractors the VW BMP should be allow for applications regardless of the geographic location of the terminal tractor.

Although the terminal tractor is often mistakenly considered solely port equipment, the language in the Consent Decree does not limit it to ports. The Consent Decree defines PCHE as "rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hosters and yard tractors that operate within ports". From a grammatical standpoint, the initial series "gantry cranes...and terminal tractors" consists of a complete series with finality of the list expressed with "and" followed by, "terminal tractors". This last item is followed by “, including” and a subset of terminal tractors, the comma is required before “including,” because it is introducing a partial list (per Garner's Modern American Usage). Immediately following this
is the phrase "that operates within ports", which is a dependent clause. A dependent clause provides additional information but is not a complete sentence. Since the subset list and the dependent clause are contained within commas then this is a nonrestrictive clause. The additional information contained within the nonrestrictive clause is not necessary to understand the sentence/definition. Thus, if it was intended for all equipment listed before the comma to operate within ports then "that operate within ports" would have been separated by a comma after "yard tractors".

This construct does not limit terminal tractors to port usage. Furthermore, the language, as written, allows for terminal tractors to be included without geographic restriction.

Port Definition

**Suggestion:** If it is determined that terminal tractors are limited to ports, then the Final VW BMP should define "port" not as a seaport but broadly enough to account for all modes of cargo movement, as detailed below.

To ensure a functional definition of port in the VW BMP please consider adding the following - "For purposes of this VW BMP, the term "port" connotes a hub or node in the goods movement supply chain with freight activity that facilitates the distribution of goods by any mode of transportation across marine, air, rail and truck." This is evidenced in various sources:

- The Congestion Mitigation and Air Quality Improvement (CMAQ) Program which serves as a blueprint for the EPA’s views on “ports” allows the funding of “port-related freight operations” 23 U.S. Code sec. 149 (b)(8)(A)(ii), “port-related equipment” is later defined in 23 U.S. Code sec. 149 (k)(4) to mean “port-related landside nonroad or on-road equipment that is operated within the boundaries of a nonattainment area.” Looking at this definition it includes those activities that are undertaken as part of a larger port shipping operation, which occur further inland. Logically, this would include the unpacking of container boxes and the freight therein being put into the stream of commerce in various intermodal and distribution centers.
- The EPA acknowledges the role of land ports in its *Ports Primer: 2.1 The Role of Ports* and notes that "many considerations related to marine ports may also apply at inland water or land ports”.

In support of this position Tennessee has adopted a definition of port that is expansive enough to allow for it to include a much larger geographic area. In its plan Tennessee defines port as “facilities along navigable water for the loading and unloading of cargo from ships; places from which aircraft operate that have paved runways and passenger and cargo terminals which include baggage-movement and passenger-transit operations; a node in the larger goods movement supply chain, to include cruise terminals, bulk terminals, container terminals, and intermodal container transfer facilities.” This definition allows for the broader concept of port to be recognized.

Eligible Categories
**Suggestion:** The Final VW BMP should allow for a more efficient vehicle that performs the same or similar functionality to replace an existing vehicle.

Allowing “similar-for-similar” replacement in Category 1 (and perhaps others) has the potential to be transformative, focusing on the operational needs of a facility rather than strictly requiring “like-for-like” replacement. As an example, the role of a yard truck is often performed less efficiently by an over-the-road drayage truck. If the functionality of a diesel on road drayage truck can be replaced with an all-electric on-road registered yard truck, program goals are met, and the community and environment benefit. This similar-for-similar replacement can result in higher emission reduction when a similar vehicle provides for zero emission while the current replacement (like-for-like) vehicle has not achieved zero emission capabilities. Furthermore, the comparison of similar-for-similar vehicles can be readily scored utilizing the functionality in the EPA Diesel Emission Quantifier tool.
Hello,

Will answers be provided to those who submitted questions?

Also, is there an anticipated start date for the solicitation?

Is railyard cargo handling equipment including in the category of Off-Road Equipment? It is not specifically listed under Section D. Categories of Eligible Mitigation Actions and Projected Allocations of Trust Funds, but under the Trust Agreement outlined in Section A. Beneficiary Mitigation Plan Requirements, “Forklifts and Port Cargo Handling Equipment” is a category that is eligible for funding. Railyard equipment would be 1) yard tractors 2) rubber tire gantry cranes and 2) side loaders.

Are electrical improvements to the grid (in order to supply the necessary power onsite) included in funding? BNSF has experience with projects where grid improvements to the site were necessary in order to supply charging for all-electric yard tractors. The project funding source did not cover grid improvement costs (it only covered charging stations for the vehicles) and therefore, the project did not proceed.

If you have questions/need clarification on any of the items above, please do not hesitate to reach out.

Amanda Marruffo
Senior Manager Environmental Operations (Air Quality)

BNSF
RAILWAY
RE: Comments on the Volkswagen Diesel Emissions Settlement and the Environmental Mitigation Trust Implementation for the States

Dear Alec,

Ozinga was established in 1928 as a small coal and coke yard by Martin Ozinga Sr. who worked tirelessly to create a sustainable business that survived the Great Depression. Martin Sr. transitioned the company to his sons who helped expand the business after their return from service in World War II. With coal and fuel oil on the decline, Ozinga began producing ready mix concrete in the 1950s, which rapidly became the company’s predominant product. During the third generation’s ownership, the company expanded into the downtown Chicago market, supplying concrete for the new Comiskey Park (now Guaranteed Rate Field), the Dan Ryan Expressway, and Soldier Field, among many other notable Chicago projects.

When the fourth-generation took the reins, they continued the company’s commitment to innovation by continuously expanding their product and service offerings to stay ahead of the ever-growing needs of building industry. In 2008, the company began their materials operation to handle all bulk material and transportation needs, which includes logistics services through an extensive network of truck, rail, barge and ship terminals. In 2012, Ozinga unveiled Chicago’s first privately owned natural gas fueling station, and the energy operation has continued to expand its services with CNG fleet fueling solutions; truck service, repair and parts; and custom CNG compressor and station installs.

Over the years, the company has grown into a strategic building partner leading the industry by providing Illinois consumers concrete, aggregate materials, and Natural Gas solutions through a fleet of barges, boats, rail, and the iconic red and white striped concrete mixers. We appreciate the opportunity to provide public input into the design of the Illinois VW Environmental Mitigation Trust (Mitigation Plan). Our proposed plan will mitigate the effects of VW actions and support community efforts to invest in advanced technologies that we are using already in transportation fuels that save energy, reduce emissions and cuts costs.

The VW EMT funds provide an extraordinary opportunity for Illinois as to put significantly cleaner Natural Gas vehicles on the road in public and private fleets. This funding can and should be used to continue the use of cleaner, alternative fuels that offer a cost-effective alternative to funding diesel vehicles.
Ozinga will be deploying the latest Cummins natural gas engines that are the only “near-zero” engines that are certified to perform at 0.02 g/bhp-hr of nitrogen oxide (NOx) emissions or better and should not be confused with diesel engines certified to the 2010 EPA standard of 0.2 g/bhp-hr NOx standard. The 0.02 g/bhp-hr NOx standard requires that engines outperform the federal standard by 90 percent and is the cleanest heavy-duty engine standard today. It also is the lowest level currently recognized under California’s Optional Low-NOx Standard (OLNS) for engines.

Cummins natural gas engines are the only available internal combustion engines that have been certified to California’s 0.02 OLNS and thus are the only true Near Zero engines available in the marketplace today. 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 and delivering the most nitrogen oxide (NOx) emission reductions for the lowest cost. Ozinga’s natural gas Ready Mix trucks are currently transforming the medium- and heavy-duty Illinois transportation sector.

Sustainable: NGVs Maximize Long-Term Emission Reductions

Key Point: Today’s natural gas medium- and heavy-duty engines provide unmatched reductions of smog forming emissions of nitrogen oxides (NOx).

“Near Zero-Emissions”: EPA and CARB Certified a Heavy-Duty Natural Gas Engine to 0.02 g Standard

In September 2015, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) certified the world’s first heavy-duty engine that emits oxides of nitrogen (NOx) at levels so low that they are considered at “near-zero” (0.02g NOx/bhp-hr). This is the cleanest commercially available heavy-duty truck engine available in the market today, offering the ability to reduce emissions 90% below even the most stringent U.S. EPA standards.

Today’s natural gas engines offer a 90% NOx reduction over the EPA’s strictest emission standards, making them the cleanest commercially available technology.

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1. Gladstein, Neandross & Associates. Game Changer Technical White Paper (2016) http://ngvgamechanger.com/, Section 6.4 and Appendix 1. Emissions of low-NOx natural gas engines produce NOx emissions that are comparable to or lower than similar electric drive vehicles in all 50 U.S. states when considering upstream NOx.
NGVs Have Lower NOx Emissions Than All-Electric Trucks

The emission benefits of the new “Near-Zero” engine are well documented in the 2016 Game Changer report issued by Gladstein, Neandross and Associates (GNA). The GNA report indicates that a truck or bus equipped with a natural gas engine that has been certified to the 0.02 g/bhp-hr Optional Low NOx Standard has tailpipe NOx emissions that are comparable to—or possibly lower than—the amount of NOx emitted to produce electricity used to charge a comparable heavy-duty All-Electric Truck.

Critical Insight:
Study Finds that Natural Gas Engines Outperform Diesel Engines in Real World Situations

Natural gas (NG) engines today meet an optional Low NOx standard that is ten times cleaner than the standard required for new diesel and natural gas engines. However, the in-use emission benefits of NG engines could be even more significant.

A recent report published in Environmental Science and Technology, evaluated in-use emissions of earlier model year NG vehicles and found that NG engines performed much better in real world conditions (i.e., operating within city limits in low-speed, high-idling situations), registering NOx levels that were 96% lower than levels produced by tested diesel engines equipped with the latest emissions controls. The study found that diesel NOx emissions operating in similar conditions produced emissions that were 5-7 times higher than in-use certification limits in some cases.

1. See NGVAmerica Comments on the Volkswagen Diesel Emissions Settlement and the Environmental Mitigation Trust Implementation for the States
Related Recommendations for EMT Funding

- Provide a higher level of funding for technologies that are proven to exceed federal emission levels for nitrogen oxides
  - Vehicles with engines certified to California’s Optional Low-NOx Standard should receive the highest level of funding (e.g., 25% in the case of private sector vehicle replacements)
  - Use the state’s approved DERA plan to fund low-NOx natural gas trucks (i.e., 35% of the replacement cost for private vehicles equipped with low-NOx engines)

- Provide the highest level of funding to applications that will reduce the largest share of NOx emissions
  - Evaluate the main mobile source(s) of NOx emissions in urban and non-attainment areas (Note: In most regions, this means prioritizing funding for short-haul, regional-haul, and refuse trucks)
  - Do not segment the funding – fund the projects that best achieve the most NOx reductions

Dollar-for-Dollar Natural Gas Delivers Greater Numbers of Total Vehicles and Greater Total Tons of NOx Emission Reductions

This is illustrated by the chart below which looks at several different funding options for natural gas and electric vehicles including providing 100% of the cost of new, replacement vehicles for public fleets, using the maximum funding levels specified in the settlement for natural gas and electric vehicles purchased by private fleets, or funding only the incremental cost of new, replacement vehicles. In each case, the deployment of natural gas vehicles (e.g., regional haul trucking, refuse trucks, and transit buses) will provide the most NOx emissions reduction to comply with the EPA’s latest national ozone standards.
Critical Insight: Heavy-Duty Electric and Fuel Cell Vehicles are currently NOT Commercially Available

Near-zero-emission internal combustion engines fueled by conventional or renewable natural gas is the only unique fuel-technology Heavy Duty combinations that hold the most promise to successfully transform America’s HDV transportation sector to zero and near-zero emissions.

**Critical Insight:**
**Comparable All-Electric Vehicles Cost 2-3x More Than an NGV**

While actual cost depends on the application, an all-electric medium- or heavy-duty vehicle usually costs two to three times the amount of a comparable vehicle powered by a 0.02 g NOx natural gas engine. As noted above, funding heavy-duty NGVs delivers greater emission reductions than similar projects involving all-electric trucks, and they offer the best ability to reduce emissions on a large scale because the funding will extend further.

Near-zero-emission internal combustion engines fueled by conventional or renewable natural gas are the only option to immediately and cost-effectively provide extremely low NOx and GHG emissions in high-impact HDV sectors.

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

Thank you again for taking time out of your day to meet with Rich DeBoer and myself. As discussed in our meeting, please feel free to reach out for more information on Ozinga and benefits of natural gas vehicles in Illinois.

Sincerely,

Jeffrey Bonnema
Vice President of Fleet Maintenance
April 18, 2018

Julie Armitage
Illinois Environmental Protection Agency
Bureau of Air
1021 North Grand Avenue East
Springfield, IL 62794

Re: Draft Beneficiary Mitigation Plan

Dear Chief Armitage,

The Environmental Mitigation Trust (EMT) presents Illinois with the opportunity to reduce smogforming nitrogen oxide ("NOx") emissions and to accelerate the clean-up of older, dirtier diesel buses, especially in communities that have been disproportionately burdened by these vehicles. As the Superintendent for Edinburg CUSD #4, I believe that alternative fuel school buses offer a cost-effective strategy to reduce NOx emissions and improve public health.

As a district responsible for the daily well-being of 300 students, we find it a priority to minimize their exposure to avoidable toxins within the learning environment. Our school buses transport over 100 students per day. Our buses range in age from [2011 – 2015] with an average fleet age of 5 years. Because we transport the most sensitive population of citizens, I believe that the Illinois Environmental Protection Agency ("Illinois EPA") should consider increasing school bus replacement funding, building in more flexibility to the program and prioritizing alternative fuels over diesel replacement.

**Recommended Changes to the Draft Beneficiary Mitigation Plan**

In order to increase the cost-effectiveness of projects and stretch the state’s dollars further, Illinois should increase the percentage of funding allocated to school bus replacement. School buses are an extremely cost-effective way to reduce NOx, especially when considering the population impacted and the co-benefits associated with the cleaner buses manufactured today. Furthermore, school district funding and specifically pupil transportation funding is challenging for most counties. Leveraging the VW funding is an ideal way for the state to provide a boost to school districts without increasing state appropriations.

Second, I applaud the state for embracing alternative fuel school buses in the current plan. However, the plan should provide school districts with more alternative fuel options beyond electric buses so that the district may select the solution that makes the most operational and financial sense. Consideration should be given to implementation timelines, additional costs to the district or contractor, and other deployment needs.

Our district operates 3 propane school buses and we have been closely monitoring the success of propane school buses, with a desire to begin converting our aging diesel fleet. We would appreciate the opportunity to leverage EMT funds to grow our propane fueled fleet. Cleaner buses, like propane, nearly eliminate our student’s exposure to emissions such as NOx, including...
increased asthma emergencies, bronchitis, and school absenteeism, especially among asthmatic children.¹

Third, while I appreciate the logic behind prioritizing non-attainment areas, I recommend considering opening up the opportunity to all counties in Illinois. Allowing smaller and rural counties to participate would target some of the oldest — and dirtiest — school buses operating in the state. Also, these rural routes typically have the longest exhaust exposure times for children, which are the most sensitive of populations. Finally, urban areas traditionally have more access to funding opportunities while counties outside of Chicago and Springfield do not receive priority for many federal and state funding opportunities.

We hope to support Illinois’ continued transition to a better air quality future with the purchase and deployment of alternative fuel buses and offer our support as the planning process moves forward. Should you have any follow-up questions, please reach out to me at the contact information below.

Sincerely,

Fredrick A Lamkey
Superintendent
Edinburg CUSD #4
flamkey@ecusd4.com / 217-623-5603

Julie Armitage, Bureau of Air Chief
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794

Comments on the Illinois Volkswagen Settlement Environmental Mitigation Trust Funds

Bureau Chief Armitage:

We submit the following comments on behalf of the Natural Resources Defense Council, the Environmental Law & Policy Center, Respiratory Health Association, Sierra Club, Illinois Chapter, Illinois Environmental Council, Citizens Utility Board, and Seven Generations Ahead.

We provide the following recommendations on the use of the $108.7 million in funds that the state of Illinois will receive from the environmental mitigation trust (EMT) established by the Volkswagen (VW) consent decree if it submits a Certification Form establishing a Mitigation Trust Beneficiary (Beneficiary) to administer the settlement funds. In brief, the EMT presents a significant opportunity for Illinois to reduce harmful nitrogen oxide emissions, reduce the state’s dependence on petroleum-based fuels, and modernize Illinois’s transportation sector. We recommend that the Illinois Beneficiary establish a formal stakeholder process, allocate maximum funds for light-duty electric charging infrastructure, and prioritize use of remaining funds to replace old diesel vehicles with qualified electric versions of those vehicles and associated charging infrastructure.

Introduction

The VW EMT should be allocated to support a critical transformation of the transportation sector in Illinois. This transformation should meaningfully reduce transportation NOx emissions in the short term, particularly for communities that are disproportionately burdened by air pollution today. To achieve these objectives:

1) **The Beneficiary should establish a formal stakeholder process to receive guidance on the development of its state plan.** Other states around the Midwest and the country have established forums and begun formal discussions on how to allocate their
respective EMT funds. In order to provide transparency and opportunity for all stakeholders to comment, Illinois should initiate a similar process.

2) The Beneficiary should allocate the maximum amount allowed (15 percent, or roughly $16 million) to deploy light duty plug-in electric vehicle charging stations. Charging station deployment should target intercity highway corridors, multifamily housing, workplaces, and overburdened communities. The state should also seek to leverage investments by electric utilities and public-private partnerships to create a more robust, reliable, and comprehensive network.

3) The focus of the remaining 85 percent – or $92 million – should be on medium and heavy duty electric transportation. Particular emphasis should be placed on achieving deep NOx emissions reductions in non-attainment areas and communities burdened by these emissions. Given the current state of the market, the greatest near-term opportunity could be to replace diesel buses, both school and transit, with electric buses. The funding should also be broad enough to potentially encompass other eligible transportation end uses. However, the state should avoid investments that merely replace existing diesel vehicles with newer diesel vehicles. While this might accelerate vehicle replacements by a few years, ultimately these replacements will occur anyways, leading to a very limited NOx mitigation benefit relative to electric transportation.

The foundation of these recommendations lies in the understanding that emissions of nitrogen oxides (NOx), greenhouse gases (GHGs), and other pollutants from the electric sector are declining. In the graph below, Energy Information Administration data reveals that Illinois’s power sector has markedly reduced NOx emissions: relative to 1990, total annual power sector NOx emissions were 87.5 percent lower.\(^1\) We expect these emissions – and the emissions of other criteria pollutants and greenhouse gases – will continue to decline as Illinois’s and the region’s generation portfolio shifts away from coal and towards renewable energy and energy efficiency.\(^2\) Given this underlying trend and the greater fuel efficiency of electric transportation

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\(^2\) The Illinois Legislature passed the Future Energy Jobs Act in December, 2016. The legislation requires the Illinois Power Agency to procure at least 25 percent of investor owned utilities’ electric load from renewable generation by 2025. The legislation also requires investor owned utilities to achieve substantial cumulative persistent energy efficiency savings targets. Both of these requirements will reduce power sector NOx, GHG, and other pollutant emissions. To view the complete Future Energy Jobs Act, see [http://ilga.gov/legislation/99/SB/PDF/09900582814enr.pdf](http://ilga.gov/legislation/99/SB/PDF/09900582814enr.pdf)
relative to gasoline powered transportation, switching from diesel to electric fuel can yield substantial NOx and co-pollutant reductions and fuel cost savings.

Illinois Power Sector NOx Emissions

![Graph showing emissions over time](image)

Data from U.S. Energy Information Administration

Establishing a Formal Environmental Mitigation Trust Stakeholder Process

The Beneficiary should set up a formal process for parties to share input and ensure that any plan submitted to US EPA achieves the environmental goals of the consent decree and reflects the perspectives of Illinois stakeholders, particularly those representing communities most affected by long-term transportation pollution. Here are some examples of state Beneficiary engagement that is already underway in several Midwest states:

1) **Ohio**: Ohio Environmental Protection Agency is acting as the state Beneficiary and created a central website with information on the VW settlement and state-administered mitigation trust, created a map of priority counties, and held informal public comment period through December 31, 2016. Ohio EPA will circulate a draft Mitigation Plan for formal public comments during Spring 2017.

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http://epa.ohio.gov/oae/EnvironmentalEducation.aspx#131365122-vw-mitigation-grants
2) **Minnesota:** Minnesota Pollution Control Agency is acting as the state Beneficiary and created a central website with information on the VW settlement and state-administered mitigation trust, hosted three public input sessions throughout the state this Spring, and is accepting public comments on the EMT process until June 30, 2017.⁴

3) **Iowa:** Iowa Department of Transportation is acting as the state Beneficiary and created a central website with information on the VW settlement and state-administered mitigation trust, opened a portal to receive public input on the EMT process through April 28, 2017, and established a state agency working group that will review ideas and prepare a draft plan for the Governor.⁵

4) **Michigan:** Michigan Department of Environmental Quality is acting as the state Beneficiary, created a central website with information on the VW settlement, and drafted a preliminary Beneficiary Mitigation Plan, and accepted public comments on this plan through March 3, 2017.⁶

The Illinois Beneficiary could follow the lead of these state agencies and pursue additional strategies to engage parties. In short, a transparent, accessible, and inclusive stakeholder process should lay the foundation for the development of any successful EMT plan.

**Unlocking Investment in Plug-In Electric Vehicle Charging Infrastructure**

**Vehicle Tech Terms and Relationships**

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⁴ [https://www.pca.state.mn.us/air/volkswagen-settlement](https://www.pca.state.mn.us/air/volkswagen-settlement)
Regrettably, the transportation policy space rivals the environmental policy space in its use of acronyms. The figure above harmonizes the categories of vehicle technology described in these comments.

The charging infrastructure component of the EMT can be used to support plug-in electric vehicles (PEVs), which can be charged with electricity from the grid. This includes both battery electric vehicles (BEVs) that rely entirely upon electricity and plug-in hybrid electric vehicles (PHEVs) that rely on electricity for daily driving needs, but can also use gasoline to complete trips. Because PHEVs produce tailpipe emissions when driving on gasoline, they cannot be considered zero emission vehicles (ZEVs).

The development of a robust, strategic charging station network is critical to the widespread adoption of PEVs. However, a dearth of this supporting infrastructure currently presents a barrier to a broader, more diverse PEV market. In order to overcome this hurdle, investment in charging stations along key highway corridors, multifamily housing, workplaces, and overburdened communities should play a role in the Beneficiary’s allocation of EMT funds.

Highway corridors

The deployment of DC Fast Charging stations – which can refuel PEVs much more quickly than 110 volt or 240 volt AC charging stations – are necessary to enable long distance PEV travel and eliminate the “range anxiety” that would-be PEV drivers may confront when embarking on long distance trips. Below, a map generated by Environmental Law and Policy Center reveals the location of existing non-Tesla DC Fast Charging stations, current EPA non-attainment counties, and existing rest areas in the state that could be suitable for more comprehensive DC Fast Charging deployment. High priority should be placed on publicly-available DC fast charging equipment on major highway corridors, to allow long-distance travel across the state.

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8 While AC Level 2 charging is able to deliver 10-20 miles of range per hour of charging, DC fast charging can deliver 150-210 miles of range per hour of charging. See Alternative Fuels Data Center, “Developing Infrastructure to Charge Plug-in Electric Vehicles,” U.S. Department of Energy available at: http://www.afdc.energy.gov/fuels/electricity_infrastructure.html
9 See https://www.plugshare.com/ There is a focus on non-Tesla DC Fast Charging stations because Tesla employs proprietary charging technology that is only accessible to owners of Tesla vehicles. In order to assuage range anxiety and meaningfully accelerate the PEV market, access to fast and reliable highway corridor charging is a necessity for all PEV models.
While DC Fast Charging stations are generally sited in the Chicago and St. Louis metro areas, there is very little deployment along highway corridors in rural areas that may enable PEV drivers to complete longer trips that would otherwise have occurred in a gasoline vehicle. Would-be PEV drivers need to know they can drive from Chicago to Springfield, Des Moines, St. Louis, and other regional destinations before making the decision to purchase a PEV. To this end, Illinois should also coordinate with Volkswagen on Appendix C ZEV Investment Plan activities and surrounding states on their use of EMT funds to build out a more robust, complementary fast charging network.

Multi-unit Dwellings

The Beneficiary should target a portion of funds towards multifamily housing. Access to overnight, residential charging is critical to support PEV adoption; it is highly unlikely that a prospective driver would purchase a PEV without the ability to plug in at home. Unlike single-family homeowners, multifamily housing tenants face unique market barriers that may limit
reliable access to overnight charging and ultimately impede the decision to drive a PEV. For this reason, targeting the multifamily housing segment can help spur PEV adoption where it otherwise would not have occurred.

Deployment of charging infrastructure in disadvantaged communities and communities in non-attainment areas can also help residents overcome impediments to PEV adoption and improve local health outcomes. These efforts should be coupled with substantive investments in other electric transportation opportunities using the remaining 85 percent of the EMT as explained further below.

Workplace Charging

Finally, workplaces present another key opportunity for charging infrastructure deployment. Outside of the home, workplaces are where PEVs sit for the longest period during the day. It has been demonstrated that employees of companies that have accessible charging stations are significantly more likely to purchase a PEV than an average worker. The Department of Energy recently concluded that employees of companies who participated in its “Workplace Charging Challenge” were 20 times more likely to drive a PEV than the average worker.10 Workplace charging can also increase the electric vehicle miles traveled (eVMT) of plug-in hybrid electric vehicles and provide greater visibility for PEVs generally.

Utility Engagement

The Beneficiary should also work with the appropriate electric utilities to ensure the appropriate electric infrastructure is in place to support the integration of charging stations in the above target segments. As the fuel and infrastructure providers for PEVs, electric utilities also can have a significant role to play in charging infrastructure investment, customer education and outreach, and other market acceleration programs. A potential partnership with these utilities that involves matching funding can stretch the EMT funding and accelerate the PEV market even further. For example, if a utility plans to invest $10 million in supporting distribution infrastructure in its service area, the Beneficiary could potentially leverage this investment to increase the deployment without adding spending additional EMT funding. This coordination ensures that investments made by VW and utilities are complementary, efficiently allocated, and effective in spurring PEV growth.

10 U.S. Department of Energy, Workplace Charging Challenge – Progress Update 2014: Employers Take Charge
With the introduction of new long-range all-electric vehicles such as the Chevy Bolt, Illinois should ensure that a robust charging station network is in place to support widespread transportation electrification. To the extent VW invests in charging infrastructure in certain target segments described above as part of Appendix C in the VW Consent Decree, the Beneficiary should focus its efforts on deploying infrastructure in other areas not covered by Appendix C or other available funding. Now that Chicago has been selected as a priority metro area for Cycle 1 investment in the National ZEV Investment Plan, the Beneficiary should carefully coordinate deployment activities with VW to ensure that stations are being deployed effectively.

Driving Opportunities for Clean, Electric Transportation

The remaining 85 percent of Illinois’s EMT should be allocated to accelerate the transition to transportation with zero tailpipe emissions. In order to achieve improved environmental and human health outcomes in an equitable manner, the Beneficiary should generally target a) the replacement of the heaviest-polluting diesel transportation; b) that operates in close proximity to humans, especially in ozone and PM2.5 non-attainment areas burdened by criteria pollutant emissions; c) that offers the greatest cost-effectiveness as measured by the total cost of ownership over the vehicle lifecycle; and d) that will result in the greatest market transformation. The VW settlement requires state mitigation plans to include “A description of how the Eligible Mitigation action mitigates the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions.” Given this language, the locational impacts of emissions are critical to reduce human risk and exposure.

Framework for Assessing EMT Funding Decisions

A.) Eligible Vehicles & Equipment

1. Class 8 Trucks
2. School / Transit / Shuttle Buses
3. Freight Switchers
4. Ferries / Tugs
5. Ocean-Going Vessels
6. Class 4-7 Trucks
7. Airport Ground Support Equipment
8. Forklifts & Port Cargo Equipment
9. Light-Duty EV Infrastructure
10. DERA Project Non-Federal Fund Match

B.) Eligible Technologies

1. Electric
2. Alternative Fuel
3. New Diesel

C.) Proposed Prioritization Criteria

1. NOx Reduction: Number of vehicles and NOx emissions per vehicle.
2. Human Risk / Exposure: Location, hours of operation and daily routes in relation to population density in nonattainment areas.
4. Anticipated Market Impact: Opportunity to transform & scale new market considering existing inventory mix and remaining useful life of equipment.
According to the most recent data from US EPA, the current non-attainment counties for 8-hour ozone and particulate matter – both of which are products of NOx emissions – in the Chicago metro area (Cook, Du Page, Grundy, Kane, Kendall, Lake, McHenry, and Will) and the St. Louis metro area (Madison, Monroe, Randolph, and St. Clair). It is important to note that these pollutants may not be distributed equally within counties, and emphasis should be placed on replacing diesel transportation in communities that face the brunt of the emissions impacts.

Electric School Buses

Electric school buses present a unique and practical opportunity to reduce NOx emissions. Regrettably, children are often the most exposed and most vulnerable to diesel emissions from school buses. Children are exposed to diesel fumes while riding and getting on and off diesel school buses. Asthma, which diesel pollution exacerbates, is now the most common chronic condition among U.S. children, affecting 1 in 10 in the U.S. Of all Illinois children, 13.6 percent have been diagnosed with asthma. More than 10 million U.S. children aged 17 and younger have been diagnosed with asthma. Among African-American and Hispanic children the rates are higher. Some Chicago neighborhoods have asthma prevalence rates of 1 in 3 children. Asthma attacks are triggered by pollutants like NOx emissions from diesel school buses and can cause hospitalizations and even deaths.

Eliminating school bus tail pipe emissions by going electric can help reduce both children’s risk of developing debilitating respiratory diseases and being subjected to exacerbations of chronic lung disease like asthma. These buses are also a practical end use for transportation electrification: electric school bus pilot projects currently underway in Massachusetts suggest additional cost saving opportunities such as the ability to serve as a backup source of power (vehicle-to-building technology) and to sell electricity back to the grid when the vehicles are not in use as school buses generally sit idle during the peak demand hours of the day (vehicle-to-grid technology).

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11 See Current Nonattainment Counties for All Criteria Pollutants available at: https://www3.epa.gov/airquality/greenbook/index.html#Notes
12 http://www.lungchicago.org/site/files/487/54230/212503/755733/Asthma_in_Chicago_.pdf
14 A landmark US study has also linked diesel exhaust exposure to lung cancer. https://www.ncbi.nlm.nih.gov/pubmed/22393207
15 https://www.boston.com/cars/cars/2016/11/30/concordelectric-school-bus-is-leading-the-clean-energy-charge
The purchase price of electric school buses is currently about three times that of conventional buses ($300,000 versus $100,000). However, the purchase price of these buses will continue to fall in future years as vehicle and battery prices drop. The opportunity to use VW settlement money towards electric school bus pilots means that school districts would have the time to test the technology now while the purchase price is higher and potentially be ready to purchase when the technology becomes cost-competitive. Mitigation funds could lead to the transformation of school bus fleets in Illinois to zero-emissions which is especially important since school children are particularly vulnerable to the negative health impacts, such as asthma, of NOx emissions.

The Beneficiary should seek to emphasize and facilitate the deployment of electric school buses in disadvantaged and overburdened communities. State mitigation funds could be leveraged to greater effect if the money is used to cover the difference between the purchase price of electric school buses and conventional vehicles for districts that have already slated fleet replacement in their budgets.

*Electric Transit Buses*

Another reliable source of deep NOx reductions is the replacement of diesel transit buses with electric buses, particularly in the Chicago area. The advancement of new battery technologies can now propel electric buses up to 350 miles before needing to recharge, making them a reliable transit option.\(^{17}\) The Chicago Transit Authority (CTA) has already incorporated two electric buses into its fleet and made additional commitments to purchase up to an additional 27 buses, which can save approximately $300,000 in fuel costs and over $600,000 in terms of health outcomes associated with respiratory disease and illness over the life of each bus.\(^{18}\) Compared to the 2001 6400-series Nova buses that they replaced, each electric bus will reduce NOx emissions by over seven tons.\(^{19}\) Because CTA’s buses travel approximately 30,000 miles per year and emit harmful pollution in densely populated areas, their replacement with zero emitting buses presents a significant opportunity to reduce fuel costs, clean our air, and safeguard our communities.\(^{20}\) The Beneficiary should seek to emphasize the deployment of electric buses along bus routes in the Chicago area’s disadvantaged and overburdened

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19 Ibid.

communities, which are often disproportionately impacted by criteria pollutant emissions. To the extent it is necessary for the successful operation of an electric bus fleet, the Beneficiary should permit the allocation of funding for associated charging infrastructure.

Electric Trucks

Another vehicle category ripe for electrification is medium duty trucks (Class 4-6) such as street sweepers and trash haulers. Because battery technology to date keeps the electric range of these vehicles around 100 miles, these trucks are best suited for short or medium distance applications. Notwithstanding vehicle range, electric trucks can offer enormous fuel cost savings relative to their inefficient diesel counterparts. Diesel delivery trucks have been observed to register a maintenance cost of 22 cents per mile while electric delivery trucks typically run around 5.6 – 11.1 cents per mile.\(^{21}\) In accounting for these variable costs as well as the upfront cost of the vehicle, the median total cost of ownership of an electric delivery truck was 22 percent lower than that of a diesel equivalent – all while eliminating tailpipe NO\(_x\) emissions.\(^{22}\) For these reasons, Drive Electric Chicago offers rich incentives for organizations to integrate electric trucks into their fleets.\(^{23}\) In order to help maximize the NO\(_x\) mitigation impact of available VW funds, the Beneficiary should first determine whether or not additional incentives for electric trucks will drive incremental adoption of electric trucks.

In short, though the upfront costs of these technologies exceed those of diesel or compressed natural gas, the fuel and maintenance cost savings realized over the life of the vehicle more than make up for this one-time cost. With this in mind, EMT funding should be allocated in a way that meaningfully lowers barriers to the adoption of electric transportation, especially in light of this objective with the goal of achieving substantial, targeted NO\(_x\) emissions reductions in the limited financial resources. For example, instead of using EMT funding to cover 100 percent of the upfront cost of an electric transit bus, Illinois EPA could stretch the funding further by covering a percentage such that the cost of the electric transit bus is comparable to its diesel counterpart.


\(^{22}\) Ibid.

\(^{23}\) See http://www.drivecleanchicago.com/About/What.aspx
Conclusion

Illinois’s portion of the overall EMT presents the state with a significant opportunity to reduce its transportation sector emissions now and for years to come. We recommend that this funding be used to accelerate the adoption of electric transportation across a suite of end uses. To effectively drive light-duty NOx emissions downward, we strongly recommend that the Beneficiary invest up to the 15 percent cap on charging infrastructure that enables long-distance PEV corridor travel and unlocks light-duty PEV growth in areas underserved by the current charging station market. The State should also seek to leverage partnerships with the electric utility industry to further stretch VW funds to develop charging infrastructure networks. With the remaining funds, the agency should include opportunities to electrify transportation such as school and transit buses and trucks. We look forward to working with the Beneficiary and other interested stakeholders to develop a robust, comprehensive, and equitable mitigation plan.

Sincerely,

Noah Garcia  
*Schneider Fellow*  
Natural Resources Defense Council

Brian Urbaszewski  
*Director, Environmental Health*  
Respiratory Health Association

Tamara Dzubay  
*Clean Energy and Sustainable Business Specialist*  
Environmental Law & Policy Center

Jack Darin  
*Director, Illinois Chapter*  
Sierra Club
Dave Kolata  
*Executive Director*  
Citizens Utility Board

Jen Walling  
*Executive Director*  
Illinois Environmental Council

Gary Cuneen  
*Founder and Executive Director*  
Seven Generations Ahead  
1049 Lake Street, Suite 200
Under the recent Volkswagen Clean Air Act Civil Settlement, Midwest states stand to receive more than $420 million for local air quality efforts, including electric vehicle infrastructure and air quality mitigation efforts (targeting vehicle and equipment upgrades).

The settlement provides an opportunity to offset more than 40,400 tons of NOx pollution resulting from illegal defeat devices in VW vehicles. This creates a unique opportunity and obligation for Midwest states to modernize public vehicle fleets and infrastructure, reduce harmful diesel pollution, and stimulate economic development across the region.

Seizing the VW Opportunity

Illinois has been allocated $108 million through the VW Settlement Mitigation Trust. These funds must be used towards 10 eligible vehicle and equipment upgrades, with a maximum of 15% ($16.2 million) for light-duty electric vehicle infrastructure.

<table>
<thead>
<tr>
<th>State</th>
<th>VW Settlement ($ millions)</th>
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<tbody>
<tr>
<td>Illinois</td>
<td>$91.8</td>
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<tr>
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<td>Iowa</td>
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Illinois’s VW Settlement Actions To-Date:

- Illinois has not yet appointed a lead agency, but questions and comments can be directed to Brad Frost at brad.frost@illinois.gov.
Evaluating Eligible Uses of Funds:
In evaluating potential investments in eligible vehicles, equipment, and technologies, Illinois should focus on specific opportunities to minimize NOx emissions and human exposure while maximizing cost effectiveness and market impact. Mitigation investments should also seek to protect and improve quality of life for Illinois’s most vulnerable and disproportionately affected residents, including children.

High-Impact Opportunities to Drive the Electric Vehicle Market Forward:
- Maximizing the allowable 15% of funds for light-duty electric vehicle infrastructure and prioritizing investment in electric vehicle fast-chargers along Illinois’s National Charging Corridor highways (I-80, I-90, I-94, I-39, I-55 & I-74)
- Investing the remaining 85% of funds in electric vehicle upgrades for large, public fleets that operate in densely-populated areas, such as school and transit buses
- Electric school buses can uniquely support renewable integration with the electric grid which can help Illinois achieve its renewable portfolio standard of 25% by 2025

What is ELPC doing?
ELPC is supporting state efforts to maximize this opportunity to modernize public vehicle fleets, reduce harmful air pollution, and grow the Midwest’s clean transportation economy.

ELPC’s Webinar: Electric School Buses - A VW Settlement Opportunity
This webinar provides an overview of electric school bus benefits and funding opportunities, with updates and case studies from electric school bus pilot programs across the US.

Environmental Law & Policy Center www.ELPC.org
July 22, 2017

Brad Frost, Office of Communications  
Illinois Environmental Protection Agency  
1021 North Grand Ave. East  
Springfield, IL 62794

Dear Mr. Frost:

Gold Star FS, Inc. encourages the adoption and utilization of propane-powered vehicles as part of Illinois’ Volkswagen Environmental Mitigation Plan. We stand ready to engage in your efforts to offset Volkswagen’s excess emissions with the accelerated adoption of environmentally-friendly alternative fueled vehicles.

Propane has a proven track record as a transportation fuel in fleets. Several companies offer both OEM and aftermarket conversions for propane vehicles, allowing fleet managers to select the option that best fits their need. Some of the advantages for fleets to switch to propane autogas-fueled vehicles include:

- Lower total-cost-of-ownership
- Comparable performance to conventional fuels
- Onsite fueling
- Reduced maintenance
- Lower emissions

One great benefactor of the settlement would be Illinois school children and their districts across the state. Allocating part of the settlement to this endeavor would provide long-term savings for school districts and private contractors alike as school transportation budgets continue to shrink. There are already many Illinois school districts that have buses running on clean burning propane.

Thank you for your consideration and please use us as a resource as you examine the best ways to use Illinois’s allocation. Contributing $1,675,762,000 to the state’s GDP, Illinois’ propane industry is ready to engage in Illinois’ environmental mitigation plan.

Sincerely,

H John Morrell Jr  
Gold Star FS, Inc.  
CEO/General Manager

cc: Dan Swanson  
    Chuck Weaver  
Peggy Schneider, EPA Legislative Liaison
July 31, 2017

Brad Frost, Office of Communications  
Illinois Environmental Protection Agency  
1021 North Grand Ave. East  
Springfield, IL 62794

Dear Mr. Frost:

South Central FS, Inc. encourages the adoption and utilization of propane-powered vehicles as part of Illinois’ Volkswagen Environmental Mitigation Plan. We stand ready to engage in your efforts to offset Volkswagen’s excess emissions with the accelerated adoption of environmentally-friendly alternative fueled vehicles.

Propane has a proven track record as a transportation fuel in fleets including The City of Effingham, South Central FS, North Clay School, Shelbyville School, and Cumberland School. Several companies offer both OEM and aftermarket conversions for propane vehicles, allowing fleet managers to select the option that best fits their need. Some of the advantages for fleets to switch to propane autogas-fueled vehicles include:

- Lower total-cost-of-ownership
- Comparable performance to conventional fuels
- Onsite fueling
- Reduced maintenance
- Lower emissions

One great benefactor of the settlement would be Illinois school children and their districts across the state. Allocating part of the settlement to this endeavor would provide long-term savings for school districts and private contractors alike as school transportation budgets continue to shrink. There are already many Illinois school districts that have buses running on clean burning propane.

Thank you for your consideration and please use us as a resource as you examine the best ways to use Illinois’s allocation. Contributing $1,675,762,000 to the state’s GDP, Illinois’ propane industry is ready to engage in Illinois’ environmental mitigation plan.

Sincerely,

[Signature]

Gerald Witges  
Energy Marketing Manager  
South Central FS, Inc.

cc: State Rep. Cavaletto  
State Rep. David Reis  
State Senator Kyle McCarter  
State Senator Dale Righter  
State Rep. Brad Halbrock  
State Rep. Reginald Phillips  
State Senator Chapin Rose  
Peggy Snyder, Chief Legislative Liaison
April 8, 2018

Mr. Alec Messina, Secretary
Illinois Environmental Protection Association
P.O. Box 19276
Springfield, IL 62794-9276

Dear Secretary Messina,

As a resident of Chicago’s South Side, and a Christian concerned about the impacts of environmental air pollution on the health and future prospects of residents in this community—particularly vulnerable children—I am writing to urge your agency to make sure the public health windfall of the VW settlement is used to maximum impact to protect those children’s current and future health.

We see the respiratory health challenges of Chicago’s children all around us, and how their ability to do well in school is harmed by asthma and other breathing problems. For downstate children, who may live farther from school and rely on buses to get there, the problem is also a challenge. The VW settlement offers an opportunity to make real progress.

I urge you, in the final allocation of funds, to prioritize:

- Investing in solutions near where people live and breathe
- Particularly, focus on cleanup of school buses and public transit, delivery fleets, and other sources of direct and constant exposure to diesel and other emissions
- Investing in systemic infrastructure improvements, particularly charging infrastructure for electric vehicles

Thank you for your attention to making the most of this opportunity to improve the lives of millions of Illinoisans.

Sincerely,

[Signature]

Curtis Evans