Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: BINAYA R. MSIHRA

Affiliation: EMISSION CONTROL ASSOCIATES, PASS CHRISTIAN, MS 39571

Email Address: binoymishra@yahoo.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- ✔ Class 8 Local Freight Trucks and Port Drayage Trucks
- ✔ Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- Ocean Going Vessels Shorepower
- ✔ Airport Ground Support Equipment
- ✔ Forklifts and Port Cargo Handling Equipment
- ✔ Ferries/Tugs
- Freight Switchers
- ✔ Class 4-7 Local Freight Trucks
- ✔ Diesel Emissions Reduction Act
- Light Duty ZEV Infrastructure

Should funding be provided for:

- Government Owned Vehicles Only
- Non-Government Owned Vehicles Only
- ✔ Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

Environmental Justice: Prioritize vulnerable communities	
Health Impacts: Focus on achieving health benefits by also reducing related pollutants	✔
Public Fleets: Focus on publicly-owned vehicles	
Private Fleets: Equal eligibility for privately-owned vehicles	✔
Statewide: Spread funding across Mississippi	
Volkswagen Areas: Fund projects where most diesel VWs are located	
Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton	✔

Do you use social media?

Facebook ✔ Twitter ✔ LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

COMMENTS: Summary

1. GOAL: DEQ must have the ability to fund for implementation new American technologies (patented by USPTO) which effectively mitigate NOx, CO2 and other harmful emissions.

2. OWNERSHIP:

a) 100% reimbursement of costs should also be extended to 501(c) (3) entities are non-profits which are auditable and whose profits do not inure to individual shareholders. These include many R&D institutions, universities, churches, etc.

b) Also full cost reimbursements should be extended to some privately owned equipment, e.g., diesel engines, etc. Number of private owned equipment for 100% cost reimbursement should be limited to say 1-3 units per owner so that its benefits could spread out to maximum number of diesel vehicle/engine/equipment owners.

3. INNOVATION: DEQ must have the ability to fund the implementation of new patented technologies which display their effectiveness through demonstration. Such technologies must be proactively encouraged to reduce the emissions from a diesel truck/ bus/ equipment/ on-road or off-road emission sources. Such funding should not exceed 25% of the total funding available to the State under the VW funding.

Our detailed comments are mentioned in the attached letter.

Emission Control Associates

March 22, 2019

Mississippi Department of Environmental Quality
Attn.: Mr. Elliott Bickerstaff
Contact for Public Comments on
State of MS VW Beneficiary Mitigation Plan
Jackson
MS 39225

Subject: Public Comments on the State of Mississippi's Proposed VW Beneficiary Mitigation Plan for spending its portion of funds form the VW Environmental Mitigation Trust.

Dear Mr. Bickerstaff,

Emission Control Associates (ECA) of MS takes this opportunity to introduce itself to MDEQ.

As our company's name signifies, ECA is fully dedicated to the goal of reducing and ultimately eliminating greenhouse gases – e.g., NOx and CO_2 – from diesel and other fossil fuels emissions. Towards achieving this end, it has come out with an emission reduction/elimination technology to eliminate NOX and CO_2 emissions from fossil fuels. This technology's working prototype has been vetted by third party experts and had been successfully demonstrated in the states of MS and Texas. Recently it has also been awarded the Patent from the US Patent and Trademark Office (USPTO). This is the only technology in the world today which can simultaneously address NOx, CO_2, SOx, and $PM_{2.5}$ emissions from fossil fuels – diesel and coal. It does not require any modification in the engine, but adds a small zero-GHG emission reactor ("Xero") after the tailpipe, does not require any expensive additives and is therefore the most cost-effective and least intrusive solution to the GHG emissions in today's world. It also does not have any fugitive emissions or emissions from its by-products. ECA is keen to launch this technology from the State of MS (Harrison or Hancock counties, where pollution levels are higher). Therefore, ECA would like to participate in the VW Beneficiary Mitigation Plan (BMP) of the State of MS and takes this opportunity to offer its comments thereon.

COMMENTS: Summary

1. **GOAL:** DEQ must have the ability to fund for implementation new American technologies (patented by USPTO) which effectively mitigate NOx, CO_2 and other harmful emissions.
2. **OWNERSHIP:**
    a. 100% reimbursement of costs should also be extended to 501(c) (3) entities are non-profits which are auditable and whose profits do not inure to individual shareholders. These include many R&D institutions, universities, churches, etc.
    b. Also full cost reimbursements should be extended to some privately owned equipment, e.g., diesel engines, etc. Number of private owned equipment for 100% cost reimbursement should be limited to say 1-3 units per owner so that its benefits could spread out to maximum number of diesel vehicle/engine/equipment owners.
3. **INNOVATION:** DEQ must have the ability to fund the implementation of new patented technologies which display their effectiveness through demonstration. Such technologies must be proactively encouraged to reduce the emissions from a diesel truck/ bus/ equipment/ on-road or off-road emission sources. Such funding should not exceed 25% of the total funding available to the State under the VW funding.

The detailed comments are mentioned below on the next pages.

We very much appreciate this opportunity to participate DEQ's efforts to mitigate various emissions in the State and shall extend full support in sharing our technology to achieve that goal.

We look forward to hearing from you in this regard.

Many thanks

Binaya R. Mishra
7387 Live Oak Way
Pass Christian
MS 39571
228-596-1270
binoymishra@yahoo.com

DETAILED COMMENTS

SERIAL NO.	ITEM COMMENT-ED ON	COMMENTS FOR ACTION (MODIFICATION/ADDITION)	REASON FOR SUCH REQUEST
1.	**3.0 Goals and Priorities**	We entirely agree with the four stated goals and priorities: • Achieve significant & sustained reductions in diesel emission exposures throughout the state – ***we fully agree and support*** • Maximize the amount of diesel emissions reduced each year per dollar invested – ***we fully agree and support*** • Support projects that invest in the replacement of older diesel emission sources with cleaner alternatives - ***we recommend the following: before the word "replacement", please add "repair, modification or"*** • Support projects that invest in new technologies including ZEV sources. ***We recommend the following: after the words "ZEV sources" please add "and other new technologies patented by the US Patent and Trademark Office"***	• First two bullet points – we have no comments as we fully support the present position as stated. • Repair and/or modification can be more cost-effective than outright replacement. There are technologies which just need installation of a device after the exhaust pipe, and will not require replacement. This will bring enormous savings in capex. • Expands the scope of technologies to include those that have recently been launched and also those that may come up in the next 2-3 years of BMP implementation. Innovations in the field of emission control has only been very few in the past 3-4 decades. Therefore, the BMP must fund any technology which effectively reduces NOx, CO_2 and other hazardous emissions. DEQ must have the ability to select such technologies to fund and implement them across the State

SERIAL NO.	ITEM COMMENT-ED ON	COMMENTS FOR ACTION (MODIFICATION/ADDITION)	REASON FOR SUCH REQUEST
2.	**4.0 Table 1.**	First Line: Along with "Large Trucks", please add **"and other large diesel-operated equipment used in ports, airports, logistics, commercial, non-profits and R&D sectors"**	The objective is to reduce harmful diesel emissions; so it should include some other major sources of diesel emissions, except those specifically excluded. These facilities may use forklifts and other equipment of cargo handling and routine operations.
3.	**Appendix A - EMA**	1. Class 8 Local Freight Trucks & Port Drayage Trucks – (b) Eligible large trucks must be scrapped" – **Our comment: Please add: "if necessary" at the end of the sentence.**	As said before, there are technologies which can just install a device to control emissions from the exhaust pipe and therefore will not require the truck to be scrapped. This will save valuable national resources.
		2. "c." Eligible LARGE TRUCKS may be Repowered with new engine. **Our comment: At the end of the sentence, please add: "*It shall also include other forms of modifications and repairs which could reduce diesel emissions at least as effectively as by engine replacement or by installing new engines.*"**	It aims to expand the scope of technology intervention to achieve the desired results. The desired goals are to reduce diesel emissions (particularly NOx). If this objective could be achieved by another technology without changing the engine, then that technology must be encouraged because this approach will be more cost-effective and more acceptable to people.
		3. Government-owned eligible trucks, etc. are allowed 100% reimbursement for Repower with a new diesel or alternate fueled engine or all electric-engine. **Our comment: please add to the "Government owned" or any such large trucks owned by 501(c) (3) entities.**	501(c) (3) entities are non-profits which are auditable and have very little or no feature of or similarity with private companies. These include may R&D institutions, universities, churches, etc. These are tax-exempt under section 501(c)(3) of the Internal Revenue Code. Such entities are operated exclusively for exempt purposes set forth in section 501(c)(3), and none of its earnings

SERIAL NO.	ITEM COMMENT-ED ON	COMMENTS FOR ACTION (MODIFICATION/ADDITION)	REASON FOR SUCH REQUEST
			may inure to any private shareholder or individual. Therefore, they should be able to get full cost reimbursements from the Fund for emissions mitigation purposes. In addition, full cost reimbursements should be extended to some privately-owned equipment, e.g., diesel engines, etc. Number of private owned equipment for 100% cost reimbursement should be limited to say 1-3 units per owner or family so that its benefits could spread out to maximum number of diesel vehicle/engine/equipment owners.
		4. For ownership of the vehicle or engine, as mentioned above, please include the 501 (c) (3) entities.	Explained as above.
	Appendix A - EMA	Our Comment: after "10. Diesel Emission Reduction Act (DERA) Option, please add the following: 11. DEQ shall have the ability to fund implementation of new patented technologies which display their effectiveness through demonstration. Such technologies must be proactively encouraged to reduce the emissions from a diesel truck/bus/equipment/ on-road or off-road emission sources. Such funding shall not exceed 25% of the total funding available to the State.	There have been only very few innovations in the diesel emission sector. SCRs, DPF, DOC, etc. have been there for some time now and do not mitigate ALL harmful emissions from diesel fuels. Therefore, a reasonable part of this funding (at least 25%) must proactively go to those technologies which show either <u>better results</u> or <u>are more comprehensive</u> (i.e. mitigate multiple emissions together) and hold a huge scope to change the emissions abatement landscape for the fossil fuels, particularly diesel.

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Dr. Moby Solangi, President

Affiliation: Institute for Marine Mammal Studies

Email Address: Moby@imms.org

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- Class 8 Local Freight Trucks and Port Drayage Trucks
- Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- Ocean Going Vessels Shorepower
- Airport Ground Support Equipment
- Forklifts and Port Cargo Handling Equipment
- Ferries/Tugs
- Freight Switchers
- Class 4-7 Local Freight Trucks
- Diesel Emissions Reduction Act
- Light Duty ZEV Infrastructure

Should funding be provided for:

- Government Owned Vehicles Only
- Non-Government Owned Vehicles Only
- Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles
- Private Fleets: Equal eligibility for privately-owned vehicles
- Statewide: Spread funding across Mississippi
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton

Do you use social media?

Facebook Twitter LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Non profit organizations, such as the Institute for Marine mammal Studies, should be allowed to participate and request funding to evaluate and study possible ways to mitigate effects of diesel machinery and ways to reduce emissions. The following type of equipment should be allowed, along with both government and non government equipment and

INSTITUTE FOR MARINE MAMMAL STUDIES

P.O. Box 207
Gulfport, MS 39502
Tel: (228) 896-9182
Fax: (228) 896-9183
www.imms.org

March 24, 2019

Elliott Bickerstaff
Contact at MDEQ for Public Comments on
State of MS VW Beneficiary Mitigation Plan

Subject: State of Mississippi's Proposed VW Beneficiary Mitigation Plan.

Dear Mr. Bickerstaff,

The Institute for Marine Mammal Studies (IMMS), a 501 (c) (3) nonprofit organization, is engaged in or for the purposes of public education, conservation, and research on marine mammals in the wild and under human care. IMMS serves as an important educational outlet for the Mississippi Gulf Coast, incorporating programs for conservation, education and research of marine mammals and their environment.

We are constantly trying to find ways and means necessary to improve marine lives on the coast of MS. We have realized that Diesel emissions – from both marine and land-based sources (boats, trucks, lifts, tractors, etc.) – have affected the lives of marine animals and plants. Additionally, hydrocarbons and their derivatives can enter the food chain and effect both humans and animals alike. IMMS played a significant role in the response to marine animals effected by the BP oil spill.

We are aware of the State's VW Beneficiary Mitigation Plan, and would like to not only participate in the program, and in this regard provide our comments as below.

A. Diesel vehicles and equipment used by non-profits, such as ours, should be allowed a 100% reimbursement for implementing technologies to mitigate diesel emissions. We are a 501(c)(3) organization, tax-exempt by Federal government, and we operate only for public benefit and not for private interests. We are also audited by the governments. Therefore, a full cost reimbursement to organizations like ours will only help us implement technologies to mitigate diesel emissions.

B. We are working with a new technology to mitigate diesel emissions and have been happy with the demonstration results. We will submit a full proposal when such proposals are solicited. At this time, however, we would like to emphasize that the choice of technology

should be left to the owner of the vehicle/equipment, and they should only be required to demonstrate that their installed technology effectively mitigates diesel emissions, particularly NOx. In other words, the BMP must be technology agnostic and must provide level playing field to all available technologies that are patented and can satisfactorily demonstrate their efficacy in mitigating diesel emissions. This way DEQ will find the best technologies for mitigation of diesel emissions in the state.

We are keen to participate in this program and demonstrate how our technology very effectively mitigates NOx emissions. We would greatly appreciate if the final rule will allow nonprofits, such as IMMS, to avail the funding opportunities for the VW program. Please keep us informed of the developments in this funding program as we are very interested in participating in the same.

Sincerely yours,

Moby Solangi, Ph.D.
President and Executive Director
10801 Dolphin Ln.
Gulfport, MS 39503
Phone: (228) 896-9182
Email: moby@imms.org

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Josh Hazel

Affiliation: _____

Email Address: jehazel@gmail.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- [ ] Class 8 Local Freight Trucks and Port Drayage Trucks
- [x] Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- [ ] Ocean Going Vessels Shorepower
- [ ] Airport Ground Support Equipment
- [ ] Forklifts and Port Cargo Handling Equipment
- [ ] Ferries/Tugs
- [ ] Freight Switchers
- [ ] Class 4-7 Local Freight Trucks
- [ ] Diesel Emissions Reduction Act
- [x] Light Duty ZEV Infrastructure

Should funding be provided for:

- [ ] Government Owned Vehicles Only
- [ ] Non-Government Owned Vehicles Only
- [x] Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles ✔
- Private Fleets: Equal eligibility for privately-owned vehicles ✔
- Statewide: Spread funding across Mississippi
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton ✔

Do you use social media?

✔ Facebook ✔ Twitter ✔ LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Infrastructure for electric vehicles is a key foundation needed. Particularly a charging infrastructure. Not only are fast-charging locations needed along major routes, but also incentives for businesses and individuals to install level 2 chargers. Charging locations can be strategically located to promote local commerce with restaurants and retail shopping.

Electric vehicles are no longer just gaining momentum, they are coming in droves. Mississippi needs to put forth the effort to be ready as the vehicles show up on the roads rather than trying to play catch-up afterward.

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Josh Hazel

Affiliation: _____

Email Address: jehazel@gmail.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- [ ] Class 8 Local Freight Trucks and Port Drayage Trucks
- [x] Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- [ ] Ocean Going Vessels Shorepower
- [ ] Airport Ground Support Equipment
- [ ] Forklifts and Port Cargo Handling Equipment
- [ ] Ferries/Tugs
- [ ] Freight Switchers
- [ ] Class 4-7 Local Freight Trucks
- [ ] Diesel Emissions Reduction Act
- [x] Light Duty ZEV Infrastructure

Should funding be provided for:

- [ ] Government Owned Vehicles Only
- [ ] Non-Government Owned Vehicles Only
- [x] Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles ✔
- Private Fleets: Equal eligibility for privately-owned vehicles ✔
- Statewide: Spread funding across Mississippi
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton ✔

Do you use social media?

✔ Facebook ✔ Twitter ✔ LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Infrastructure for electric vehicles is a key foundation needed. Particularly a charging infrastructure. Not only are fast-charging locations needed along major routes, but also incentives for businesses and individuals to install level 2 chargers. Charging locations can be strategically located to promote local commerce with restaurants and retail shopping.

Electric vehicles are no longer just gaining momentum, they are coming in droves. Mississippi needs to put forth the effort to be ready as the vehicles show up on the roads rather than trying to play catch-up afterward.

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Josh Hazel

Affiliation: _____

Email Address: jehazel@gmail.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- [ ] Class 8 Local Freight Trucks and Port Drayage Trucks
- [x] Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- [ ] Ocean Going Vessels Shorepower
- [ ] Airport Ground Support Equipment
- [ ] Forklifts and Port Cargo Handling Equipment
- [ ] Ferries/Tugs
- [ ] Freight Switchers
- [ ] Class 4-7 Local Freight Trucks
- [ ] Diesel Emissions Reduction Act
- [x] Light Duty ZEV Infrastructure

Should funding be provided for:

- [ ] Government Owned Vehicles Only
- [ ] Non-Government Owned Vehicles Only
- [x] Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles ✔
- Private Fleets: Equal eligibility for privately-owned vehicles ✔
- Statewide: Spread funding across Mississippi
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton ✔

Do you use social media?

✔ Facebook ✔ Twitter ✔ LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Infrastructure for electric vehicles is a key foundation needed. Particularly a charging infrastructure. Not only are fast-charging locations needed along major routes, but also incentives for businesses and individuals to install level 2 chargers. Charging locations can be strategically located to promote local commerce with restaurants and retail shopping.

Electric vehicles are no longer just gaining momentum, they are coming in droves. Mississippi needs to put forth the effort to be ready as the vehicles show up on the roads rather than trying to play catch-up afterward.

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is not soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Philip A. Chamblee - Executive Director

Affiliation: Mississippi Propane Gas Association

Email Address: philip@mpmcsa.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- Class 8 Local Freight Trucks and Port Drayage Trucks
- ✓ Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- Ocean Going Vessels Shorepower
- Airport Ground Support Equipment
- ✓ Forklifts and Port Cargo Handling Equipment
- Ferries/Tugs
- Freight Switchers
- ✓ Class 4-7 Local Freight Trucks
- ✓ Diesel Emissions Reduction Act
- Light Duty ZEV Infrastructure

Should funding be provided for:

- Government Owned Vehicles Only
- Non-Government Owned Vehicles Only
- ✓ Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? Please select your top three choices.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles ✓
- Private Fleets: Equal eligibility for privately-owned vehicles
- Statewide: Spread funding across Mississippi ✓
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton ✓

Do you use social media?

Facebook Twitter LinkedIn Other: www.mspropane.com

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Please see attached

Mississippi Propane Gas Association

May 14, 2018

Mr. Gary Rikard
Executive Director
Mississippi Department of Environmental Quality
PO Box 2261
Jackson, MS 39225

Re: Propane's Role in Mississippi's Volkswagen Settlement Environmental Mitigation Plan

Dear Mr. Rikard,

The Mississippi Propane Gas Association encourages the adoption and utilization of propane-powered vehicles in Mississippi's Volkswagen Environmental Mitigation Plan. The Volkswagen Settlement presents a unique opportunity for our state to accelerate the adoption of environmentally-friendly alternative fueled vehicles. Propane marketers in Mississippi are ready to engage in your efforts to offset Volkswagen's excess emissions.

Background

From 2009 to 2015, German automaker Volkswagen programmed certain vehicles to deliberately cheat laboratory emissions testing, resulting in approximately 590,000 cars in the United States emitting NO_x up to 40 times greater than the U.S. standards allow[1]. In October 2016, a judge approved a partial settlement between the Justice Department and Volkswagen, resulting in Volkswagen setting up a $2.7 billion environmental mitigation trust fund to offset the excess emissions from the affected Volkswagen vehicles. Mississippi is eligible to receive $9,249,414, some of which can be effectively spent on clean-burning propane vehicles[2].

Propane Vehicles' Successes

Propane has a proven track record as a transportation fuel in fleets across the country. Right now, the Propane Education and Research Council (PERC) estimates that there are nearly 200,000 propane-powered vehicles on the road in the U.S. Worldwide, propane is the third most utilized auto fuel, behind the conventional fuels of gasoline and diesel. The popularity of propane as an alternative fuel has led to its growing adoption in the United States, particularly by fleets. Both public and private sector organizations have found success in adopting propane vehicles into the fleets of various sizes. These include light duty, medium duty, and school bus applications[3].

According to PERC, 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

[1] https://www.epa.gov/vw/frequent-questions-about-volkswagen-violations#health
[2] Partial Consent Decree, Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation (MDL No. 2672 CRB (JSC)), at Appendix D-1 and Appendix D-2
[3] http://www.propane.com/on-road-fleets/case-studies/

As highlighted above, the use of these funds should maintain the focus on offsetting the excess Volkswagen NO_x emissions. Here, the data is clear that propane is an effective way of decreasing emissions. This is not only true when comparing the older, eligible diesel engines with modern propane engines, but also when comparing propane engines to the best, modern diesel platform. For Type C school buses, diesel engines emit 18 percent more NO_x than comparable propane models[7]. And according to the California Air Resources Board (CARB) certification data, the NO_x savings by choosing the best-in-class propane engine can be as high as 81 percent[8].

This "bang-for-the-buck" goes further when factoring in other bus ownership costs. For maintenance, a school district can expect to save $2,000-$2,500 per bus per year. This is due to propane buses requiring fewer fluids and filters to keep running. And for price, wholesale propane falls between the price of oil and natural gas, the two sources of the fuel. This makes propane price competitive with the conventional fuels. For comparison, according to the most recent Clean Cities data, the price of propane is almost 50 cents-per-gallon cheaper than diesel[9]. This figure does not take into account the savings that occur from individual propane marketers negotiating favorable pricing with fleet managers.

It's also important to look at what the marketplace already offers for NO_x reduction. For instance, the Volkswagen funds are available for electric forklifts. I would discourage you from focusing on these. The forklift market already has a NO_x reducing option—propane. By supporting electric forklifts, it would take money away from applications that can better reduce harmful diesel emissions. Unfortunately, propane-powered forklifts are not eligible for these funds. This exclusion may be shortsighted, but you can avoid expounding this problem by continuing to focus Mississippi's mitigation plan on where the best "bang for the buck" exists.

Fuel Availability

America's current domestic energy renaissance has meant drastic increases in the production of propane. Propane has traditionally been viewed as a byproduct of the oil refining process. However, the increase in production from natural gas processing has shifted this perception. In 2014, there was enough propane produced from the domestic natural gas supply to meet about 98 percent of the U.S.'s consumer and petrochemical demand. The increase of domestic production has led to record high levels of propane in recent years. Production is forecasted to continue to increase[10], ensuring a steady supply of this American-made fuel.

---

[7] *Propane Greenhouse Gas and Criteria Pollutant Emissions Comparative Analysis* Gas Technologies Institute

[8] CARB low NO_x certification data for MY2017 Roush 6.8L propane model compared with MY2016 Cummins 6.7L diesel model

[9] http://www.afdc.energy.gov/uploads/publication/alternative_fuel_price_report_oct_2016.pdf

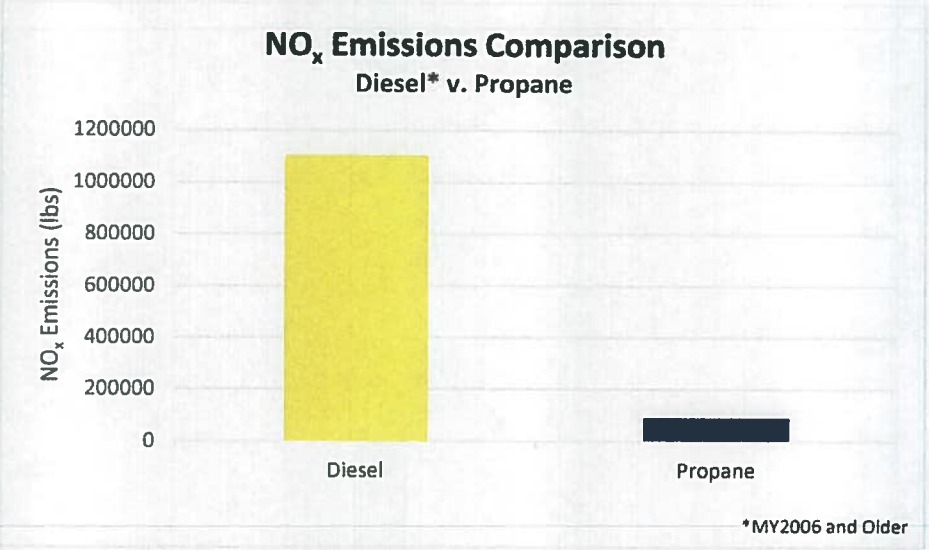
[10] *2016 Propane Market Outlook* ICF International

There are several companies that offer both OEM and aftermarket conversions for propane vehicles. This variety allows fleet managers to select the option that best fits their need. Also, as the technology continues to improve, fleets will see better fuel economy, more power output, and even lower emissions from propane-powered engines.

Propane's Role in VW Settlement

One of the most successful adoptions of propane vehicles has been school bus fleets. With the ability to install refueling apparatus cost effectively and easily on site, propane marketers have worked with school districts across the country to switch over to propane models. More than 12,000 propane-powered school buses transport 700,000 students safely every day. It is important to highlight that as part of the Volkswagen Settlement, propane school buses are eligible for **100 percent** of the replacement costs[4]. This makes their adoption using these funds very attractive to school districts in Mississippi.

When considering the use of the Volkswagen settlement dollars, it is important to highlight potential NO_x reductions. This is where propane-powered school buses are a winning choice for Mississippi. According to data from Argonne National Laboratory, if Mississippi were to replace all 3,275 eligible for this settlement with new, clean-burning propane models, there would be a **92 percent reduction in NO_x**. As an additional benefit, there would be a 99 percent reduction in particulate matter (PM) and a 92 percent reduction in tailpipe Volatile Organic Compounds (VOC)[5].



In addition to the clean air benefits, there is also the added advantage that propane buses are quieter than their diesel counterparts[6]. When factoring in all of the benefits, there is no doubt that investing Volkswagen Settlement funds into propane powered school buses would be one of the most cost effective ways of reducing the excess NO_x caused by Volkswagen.

In addition to school buses, transit buses, shuttle buses, medium duty trucks, and other applications powered by propane are also eligible for funding under this settlement. There are many "road-ready" applications that I am happy to discuss further.

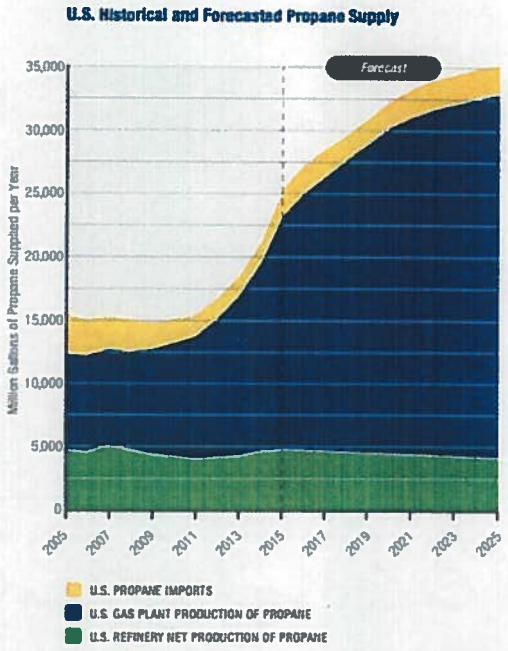
Bang for the Buck

---

[4] Supra Partial Consent Decree at Appendix D-2

[5] Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) 2016 tool (provided by Argonne National Laboratory) as well as U.S. school bus fleet data (provided by PERC) to calculate the emissions reduction potential associated with replacing diesel-fueled school buses with new (2016) propane autogas school buses

[6] The Blue Bird Propane Vision school bus cuts vehicle and engine noise by producing sound 11 decibels lower than diesel fueled buses.



Source: ICF International

In the last ten years, the United States as gone from being a net importer to a net exporter of propane. In fact, we are currently exporting nearly 10 billion gallons of propane annually. That's the equivalent of the fuel needed for 4 million fleet vehicles. Energy security and independence has been a goal of the United States for many years. By using more of our domestically produced propane, we can continue to decrease the reliance on foreign-sourced fuel.

In order to get this large propane supply to the consumer transportation market, the industry relies on a network of public and private refueling stations. Nationwide, there are more than 3,600 stations ready to supply consumers with propane. In Mississippi, there are already 97 public and private stations[11]. As you can see, propane infrastructure is already in place to facilitate Mississippi's Environmental Mitigation Plan.

Additionally, many fleet managers opt to install their own central refueling infrastructure to ease the adoption of propane into the transportation fleet. Propane infrastructure is relatively easy and affordable to install and maintain. Depending on the needs and equipment, the infrastructure installation costs can range from $37,000 - $175,000[12]. When compared to competing alternative fuels, propane's availability and accessibility is one of the most cost effective ways for adopting new technologies.

Working with Mississippi

Propane can and should play a role in our environmental mitigation plan. Already in Mississippi, there are 912 people employed by the propane industry. The propane industry also is a significant contributor to Mississippi's economy, adding $332,165,000 to the state's GDP[13].

Please use me as a resource as you examine the best ways to use Mississippi's allocation. I am happy to connect you with propane businesses, propane users, and experts to better inform you of propane vehicles' role in Mississippi.

---

[11] http://www.afdc.energy.gov/fuels/stations_counts.html

[12] http://www.afdc.energy.gov/fuels/propane_infrastructure.html

[13] *Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2012* ICF International

Please contact me with any questions at 601-354-4077. I look forward to continuing this conversation with you in the coming months.

Sincerely,

Philip A. Chamblee

Philip A. Chamblee
Executive Director
Mississippi Propane Gas Association

PROPANE AUTOGAS
CLEAN AMERICAN ENERGY

PROPANE AUTOGAS BUSES DRIVING SCHOOLS FORWARD IN THE SOUTHEASTERN U.S.

The popularity of propane autogas school buses is picking up speed around the country. That's because more school districts have discovered that propane autogas offers the lowest total cost-of-ownership available and significantly reduces harmful emissions around students.

LOWEST TOTAL COST-OF-OWNERSHIP

Transportation directors interested in long-term savings need to think beyond the pump. This is where propane autogas edges out diesel — by avoiding the typical "hidden costs" over a bus's lifetime.

FUEL: Propane autogas consistently costs less than diesel, even as fuel prices fluctuate.

FLUIDS: Diesel buses need more oil by volume compared with propane autogas buses, increasing preventative maintenance costs. Diesel buses also require fuel conditioners to prevent clogging of fuel filters and lines.

FILTERS: Diesel particulate filters are an added expense with diesel buses. The filters must be cleaned periodically to meet emissions requirements, causing extra downtime and maintenance costs.

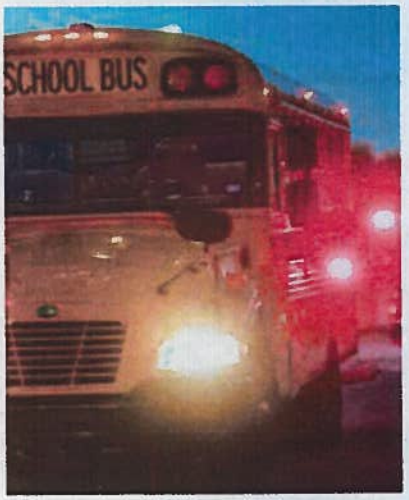
The likelihood of downtime for repairs is even greater considering the complexity after-treatment systems add to a diesel engine.

NOTICEABLY QUIETER OPERATION

As every bus driver knows, a noisy bus full of students can make concentrating on the road challenging. Compared with diesel buses, propane autogas buses operate noticeably quieter, allowing drivers to pay better attention to students and the road ahead.

CLEANER FOR STUDENTS AND COMMUNITIES

With propane autogas buses, students aren't exposed to harmful emissions — like NO_x emissions — associated with diesel buses, which can aggravate asthma and other breathing related issues. Beyond the tailpipe, propane autogas empowers schools to reduce emissions during refueling with quick-connect nozzles, which release fewer emissions per connection.



"The use of propane buses has benefitted our district greatly by decreasing our dependency on diesel fuel, reducing our emissions."

Dr. Walt Griffin
Superintendent,
Seminole County Public Schools

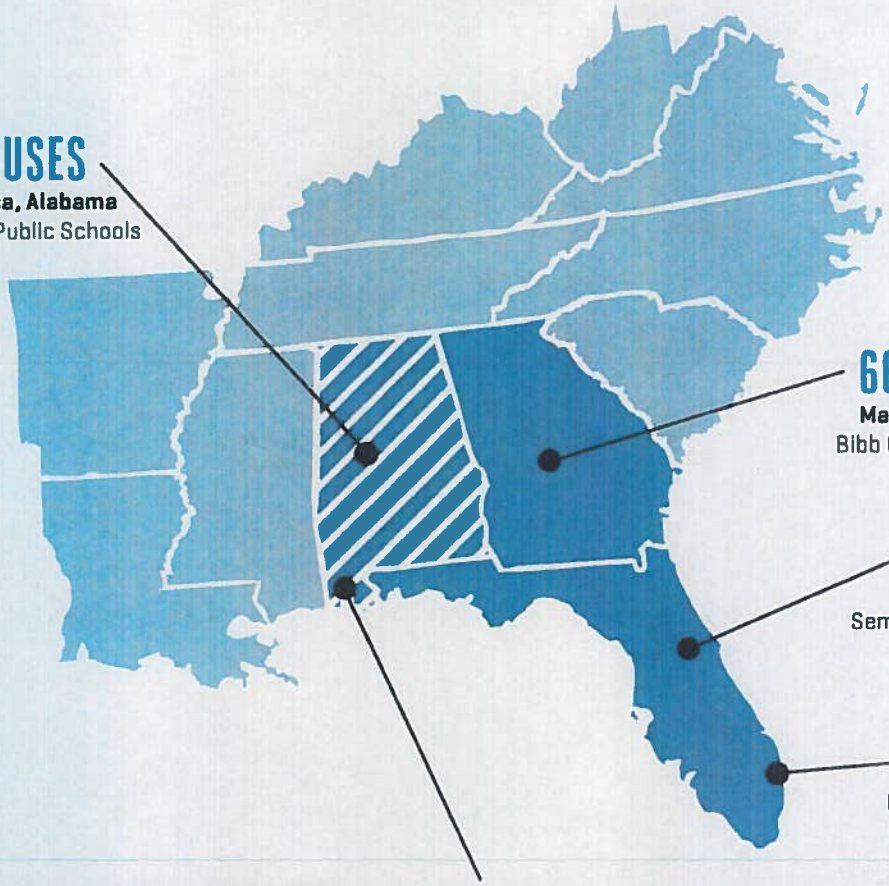
THE SWITCH	REDUCED NO_x EMISSIONS
Replace all older than model year-2007 diesel buses with new propane autogas buses.	More than 96 percent[1]
Purchase a new propane autogas bus instead of a modern, lower-emissions diesel bus.	More than 11 percent[2]
Purchase a modern, best-in-class for NO_x emissions propane bus instead of a modern diesel bus.	75 percent[3]

1. Source: AFLEET model using Polk Registration data by state for diesel buses — June 2017. By removing 235,889 of pre-2007 diesel fueled buses from the road across the country and replacing them with new propane autogas school buses, NO_x emissions would be reduced by 96 percent.
2. MY2016 certification data for PSI 8.8L propane model compared with Cummins 6.7L diesel model.
3. CARB low NO_x certification data for MY2017 Roush 6.8L propane model compared with MY2016 Cummins 6.7L diesel model.

PROPANE AUTOGAS BUSES BY THE NUMBERS IN THE SOUTHEASTERN UNITED STATES

These are just some of the districts in this region using propane autogas buses. To see how many propane autogas buses are operating in each state, go to **propaneschoolbuses.com**.

(1,715 BUSES TOTAL)



73 BUSES
Tuscaloosa, Alabama
Tuscaloosa Public Schools

66 BUSES
Macon, Georgia
Bibb County Schools

73 BUSES
Orlando, Florida
Seminole County Public Schools

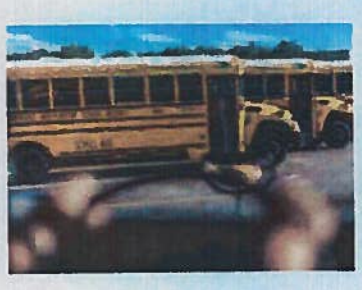
180 BUSES
Fort Lauderdale, Florida
Broward County Schools

105 PROPANE AUTOGAS BUSES

TRANSPORTING **60,000** STUDENTS DAILY

SCHOOL SPOTLIGHT:
MOBILE, ALABAMA
Mobile Public Schools

To build up its fleet's dependability, this district made the choice to adopt propane autogas buses in 2014. Since then, MPS has increased its efficiency, and its drivers love operating the propane buses.



FOR MORE INFORMATION

To learn more about the rise in popularity of propane autogas buses, and to learn more about what propane autogas could bring to your district, visit **propaneschoolbuses.com**.

Propane Education & Research Council / 1140 Connecticut Ave. NW, Suite 1075 / Washington, DC 20036
P 202-452-8975 / F 202-452-9054 / propanecouncil.org

The Propane Education & Research Council was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.

PROPANE EDUCATION & RESEARCH COUNCIL

 6643-FS-17

VOLKSWAGEN SETTLEMENT

MOVE FORWARD WITH PROPANE AUTOGAS SCHOOL BUSES

The unique benefits of this clean, American fuel make it the perfect solution for schools to cut emissions while saving more for what counts.

THE GOAL

The Volkswagen Environmental Mitigation Trust Fund will financially support actions that reduce Nitrogen Oxide (NO_x) emissions in the United States. The amount of funds distributed will vary by state or territory, depending on the number of non-compliant Volkswagen vehicles that were registered there.

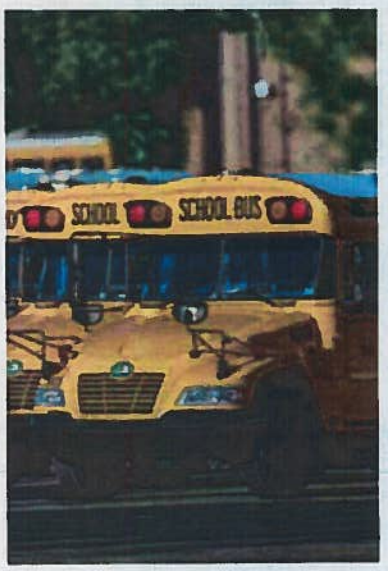
YOUR OPPORTUNITY

Your state should seriously consider including propane-powered school buses in their plans to utilize the Volkswagen settlement funds. With propane buses, you can reduce the amount of harmful diesel emissions — known aggravators of asthma and other breathing issues — around students. You could also significantly reduce NO_x emissions, depending on the amount of older diesel buses still operating in your state.

THE SWITCH	REDUCED NO_x EMISSIONS
Replace all older than model year-2007 diesel buses with new propane autogas buses.	More than 96 percent[1]
Purchase a new propane autogas bus instead of a modern, lower-emissions diesel bus.	More than 11 percent[2]
Purchase a modern, best-in-class for NO_x emissions propane bus instead of a modern diesel bus.	75 percent[3]

1. Source: AFLEET model using Polk Registration data by state for diesel buses — June 2017. By removing 235,989 of pre-2007 diesel fueled buses from the road across the country and replacing them with new propane autogas school buses, NO_x emissions would be reduced by 96 percent.
2. MY2016 certification data for PSI 8.8L propane model compared with Cummins 6.7L diesel model.
3. CARB low NO_x certification data for MY2017 Roush 6.8L propane model compared with MY2016 Cummins 6.7L diesel model.

Read on to learn how propane gives you clean performance at the lowest total cost-of-ownership.



"I think the environmental aspect of it is important to a lot of people, especially parents with young children."

Brian Woods
Superintendent, Northside Independent School District
San Antonio, Texas

DON'T MISS OUT ON PROPANE

So-called new, "clean diesel" buses come with a hefty price tag for complicated emissions-reduction technology. Propane buses reduce NO_x emissions while helping schools save for what matters most — classroom supplies, more teachers, extracurricular programs, and more.

LOWEST TOTAL COST-OF-OWNERSHIP

The costs of diesel add up quickly: expensive fuel, additional fluids, and pricey particulate filters. These are the most influential reasons why propane buses save schools more money, from purchase to retirement of the asset.

MORE UPTIME

With propane, schools can eliminate downtime linked directly to maintenance and unexpected repairs. Propane buses also provide superior cold-weather performance compared with diesel.

SAFE FOR EVERYONE

Propane buses operate noticeably quieter than diesel models, allowing drivers to better focus on their passengers and the road. Standard safety features designed into propane bus fuel systems provide added peace of mind for everyone.

AFFORDABLE INFRASTRUCTURE

School districts can choose private, on-site refueling infrastructure scaled for their needs, or take advantage of existing public or private refueling networks. Go to **propane.com** to learn more about standard private stations and advanced private stations, including typical costs. There's sure to be a perfect refueling setup for your district's needs.

AMERICAN FUEL

Using propane school buses supports our country's economy — nearly 90 percent of propane supplies are produced in the U.S.

STOP OVERSPENDING ON DIESEL

Propane gives you clean performance while lowering your cost-of-ownership in three key areas:

1. **FUEL**

The cost of wholesale propane falls between the price of oil and natural gas, the fuel's two sources. As a result, propane is almost always less expensive than conventional fuels, even as fuel prices fluctuate.

2. **FLUIDS**

New, lower-emissions diesel technology comes with an added inconvenience: diesel emissions fluid to purchase, store, and change. This is on top of needing more oil by volume compared with propane. In cold temperatures, diesel vehicles also require anti-gelling agents to prevent clogging of fuel filters and lines. Propane provides reliable performance without additional fluids.

3. **FILTERS**

To meet emissions requirements, new diesel technology requires diesel particulate filters that must be cleaned periodically. Excessive idling will accelerate cleaning intervals. Either way, extra maintenance expenses are piled on top of additional lifecycle costs. Propane autogas is an opportunity to avoid these headaches..

SWITCHING IS EASY

MAINTENANCE FACILITY NEEDS

Switching from conventional fuel to propane is quick and cost-effective, because the requirements for a propane vehicle repair facility are generally the same as those for conventionally fueled vehicles. Other alternative fuels, however, may require different facility requirements than conventional fuels, like additional gas detection and ventilation equipment — costing fleets more to switch.

Contact your local Authority Having Jurisdiction for applicable codes regarding building or modifying a propane-powered vehicle repair or maintenance facility.

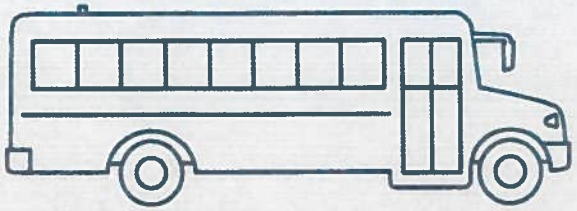
Don't hesitate to start cutting emissions while enjoying the lowest total cost-of-ownership available.

Go to **propane.com** to learn more about propane autogas buses today.

 G627-FS-17

PROPANE BUS SNAPSHOT

MISSISSIPPI



IF **MISSISSIPPI** ADOPTS PROPANE AUTOGAS BUSES, IT COULD SAVE ON FLUIDS, FILTERS, FUEL, AND REPAIRS FOR A LOWER TOTAL COST-OF-OWNERSHIP.

1 MILLION

POUNDS OF NO_x EMISSIONS A YEAR COULD BE REDUCED*

*By replacing the state's 3,049 diesel buses older than the model year 2007 with new propane buses.

PROPANE AUTOGAS
CLEAN AMERICAN ENERGY

PROPANE EDUCATION & RESEARCH COUNCIL

Investing in more propane buses is an important step to saving more money and cutting harmful emissions in your community. Learn more about propane buses at **propaneschoolbuses.com**.

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Josh Hazel

Affiliation: _____

Email Address: jehazel@gmail.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- [ ] Class 8 Local Freight Trucks and Port Drayage Trucks
- [x] Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- [ ] Ocean Going Vessels Shorepower
- [ ] Airport Ground Support Equipment
- [ ] Forklifts and Port Cargo Handling Equipment
- [ ] Ferries/Tugs
- [ ] Freight Switchers
- [ ] Class 4-7 Local Freight Trucks
- [ ] Diesel Emissions Reduction Act
- [x] Light Duty ZEV Infrastructure

Should funding be provided for:

- [ ] Government Owned Vehicles Only
- [ ] Non-Government Owned Vehicles Only
- [x] Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles ✔
- Private Fleets: Equal eligibility for privately-owned vehicles ✔
- Statewide: Spread funding across Mississippi
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton ✔

Do you use social media?

✔ Facebook ✔ Twitter ✔ LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Infrastructure for electric vehicles is a key foundation needed. Particularly a charging infrastructure. Not only are fast-charging locations needed along major routes, but also incentives for businesses and individuals to install level 2 chargers. Charging locations can be strategically located to promote local commerce with restaurants and retail shopping.

Electric vehicles are no longer just gaining momentum, they are coming in droves. Mississippi needs to put forth the effort to be ready as the vehicles show up on the roads rather than trying to play catch-up afterward.

Mississippi Volkswagen Settlement Environmental Mitigation Trust Comment Form

This form is provided to submit comments regarding Mississippi's utilization of allocated funds through the Volkswagen Environmental Mitigation Trust. The comments provided will be used to assist Mississippi in developing its environmental mitigation plan. **Mississippi is <u>not</u> soliciting project proposals as part of this information request** and will not provide responses to any comments received. Parties interested in providing comments should complete the form and submit it and any additional information via email to MSVWSETTLEMENT@MDEQ.MS.GOV, or mail to **ATTN: VW SETTLEMENT, MDEQ - Air Division, P.O. Box 2261, Jackson, MS 39225-2261.**

Name: Josh Hazel

Affiliation: _____

Email Address: jehazel@gmail.com

Which eligible mitigation action categories should Mississippi consider funding as part of its mitigation plan?
Please select all that apply.

- [ ] Class 8 Local Freight Trucks and Port Drayage Trucks
- [x] Class 4-8 School Buses, Shuttle Buses, or Transit Buses
- [ ] Ocean Going Vessels Shorepower
- [ ] Airport Ground Support Equipment
- [ ] Forklifts and Port Cargo Handling Equipment
- [ ] Ferries/Tugs
- [ ] Freight Switchers
- [ ] Class 4-7 Local Freight Trucks
- [ ] Diesel Emissions Reduction Act
- [x] Light Duty ZEV Infrastructure

Should funding be provided for:

- [ ] Government Owned Vehicles Only
- [ ] Non-Government Owned Vehicles Only
- [x] Both Government and Non-Government Owned Vehicles

What factors do you feel are the most important factors for Mississippi to consider as we develop our plan? <u>Please select your top three choices</u>.

- Environmental Justice: Prioritize vulnerable communities
- Health Impacts: Focus on achieving health benefits by also reducing related pollutants
- Public Fleets: Focus on publicly-owned vehicles ✔
- Private Fleets: Equal eligibility for privately-owned vehicles ✔
- Statewide: Spread funding across Mississippi
- Volkswagen Areas: Fund projects where most diesel VWs are located
- Cost-Effective: Achieve greatest NOx emissions reductions for lowest cost per ton ✔

Do you use social media?

✔ Facebook ✔ Twitter ✔ LinkedIn Other: _____

Please provide additional comments you believe Mississippi should consider when developing its mitigation plan:

Infrastructure for electric vehicles is a key foundation needed. Particularly a charging infrastructure. Not only are fast-charging locations needed along major routes, but also incentives for businesses and individuals to install level 2 chargers. Charging locations can be strategically located to promote local commerce with restaurants and retail shopping.

Electric vehicles are no longer just gaining momentum, they are coming in droves. Mississippi needs to put forth the effort to be ready as the vehicles show up on the roads rather than trying to play catch-up afterward.

March 25, 2019

Elliott Bickerstaff
PO Box 2261
Jackson, MS 39225

RE: **Public Comments on Mississippi's Volkswagen Beneficiary Mitigation Plan**

Dear Mr. Bickerstaff:

The 25x'25 Initiative (25x'25) appreciates the opportunity to file comments to the Mississippi Department of Environmental Quality (MDEQ) in regards to the above referenced matter. The 25x'25 is a diverse, national grassroots alliance of nearly 1000 agriculture, forestry, conservation, business and environmental organizations (including several based in Mississippi) working collaboratively to advance the goal of securing 25 percent of the nation's energy needs from renewable sources by the year 2025.

25x'25 views the Volkswagen Beneficiary Mitigation Plan (Plan) as a useful tool to incrementally reduce harmful tailpipe emissions and increase the health and safety of citizens and businesses through the retrofit, replacement or repowering of certain diesel engine systems or by installing zero emission vehicle (ZEV) related equipment.

25x25 recommends that MDEQ primarily focus utilization of the Plan funding for the mitigation and reduction of emissions from on-road diesel NOx emitting sources. This would include the following categories of eligible mitigation actions:

Category 1, including large (Class 8) freight and port drayage trucks.
Category 2, including (Class 4-7) school buses, shuttle buses and transit buses.
Category 6, including local medium freight (Class 4-7) trucks such as refuse haulers.

According to data provided in the proposed Plan, on-road heavy-duty diesel vehicles are the largest source of vehicle emissions in Mississippi eligible for mitigation action under the proposed Plan. These categories of vehicles are ever-present on our city streets, on local roads and highways, and in our communities. 25x'25 recommends that up to 70% of the funds be utilized to reduce emissions from vehicles and sources included in Categories 1, 2 and 6. Eligible actions under Categories 3, 4, 5, 7 and 8 should not be considered for funding under the proposed Plan.

Up to 15% of allocated funds should be utilized to support the eligible mitigation action under Category 9, acquiring, installing, operating and maintaining supply equipment for light-duty ZEVs. Specifically, the allowable equipment should include Level 2 or DC fast charging

equipment. We recommend not allowing hydrogen fuel call and hydrogen dispensing equipment to be eligible for funding at this time.

The proposed Plan anticipates the MDEQ will utilize up to 15% of funds for administrative expenditures to cover the costs of administering the Plan. We encourage the MDEQ to be as efficient as possible in administering the Plan and providing the maximum air quality benefits as available funds allow.

Thank you again for the opportunity to provide comments on this matter.

Sincerely,

Brent Bailey

Brent Bailey
State Activities Coordinator
25x'25 Initiative
107 Cedar Ridge Dr.
Canton, MS 39046
bbailey@25x25.org
Telephone: (601) 573-4815

Allen&Hoshall

1675 Lakeland Drive, Suite 207
Jackson, Mississippi 39216
Office 601.977.8993
Fax 601.949.4344
www.allenhoshall.com

27 February 2019

Mr. Elliott Bickerstaff
Mississippi Department of Environmental Quality
P. O Box 2261
Jackson, MS 39225

Re: Volkswagen Beneficiary Mitigation Plan

Dear Bickerstaff:

I have reviewed the Plan information and offer my support for the conversion of school bus fleets to Compressed Natural Gas fueling. This will meet the project objectives of utilizing cleaner technology for vehicles to improve air quality. In addition, local school districts would reduce their fuel and maintenance costs leaving more funds for the classroom.

CNG school busses will be especially cost effective in those areas of the state where CNG filling facilities are already in place. For example, public fast fill CNG stations already exist in Itawamba, Prentiss, and Rankin Counties. The local school districts could fill their CNG powered busses without any capital expense other than the busses.

Thank you for allowing me to provide these comments and please let me know if you have any questions or need additional information.

Sincerely,

Allen & Hoshall

Edwin K. Dedeaux, PE
Principal
601-214-6000 cell

ededeaux@allenhoshall.com

CAUS

Notes for Public Feedback to Mississippi VW Beneficiary Mitigation Plan

February 19, 2019

The Mississippi plan would be enhanced by inclusion of NOx inventory benefits from the use of the settlement funds.

As identified in the Texas Beneficiary Mitigation Plan, it would be helpful if the Mississippi plan included a general description of the expected emissions benefits that the state anticipates will be achieved by implementation of the eligible mitigation actions identified in the plan.

The methodology that is to be used to determine NOx emissions reduction is missing from the Mississippi plan. The Texas plan (RG-537; pages 15-18, pages 40-44) provides specific details on the data required and subsequent calculations used to estimate the impact across category of vehicles. The table below is an example from the Texas plan that would be generated by using this methodology.

Category *(Replacement Only)*	**Example Funding Allocation**	**Tons of NO_x Reduced**	**Cost Per Ton of NO_x Reduced**	**Number of Vehicles & Equipment**
Electric Forklifts and Port Cargo Handling Equipment and Airport Ground Support Equipment	$28,258,088	1,189	$23,776	502
Class 8a Refuse Vehicles	$28,258,087	238	$118,731	105
School Buses	$28,258,087	133	$212,467	217
Transit and Shuttle Buses	$28,258,087	235	$120,248	81
Class 6 Local Freight Truck	$28,258,087	486	$58,144	544
Class 8b Local Freight Trucks	$28,258,087	2,699	$10,470	733
Totals	**$169,548,523**	**4,980**	**$34,046**	**2,099**

ChargePoint, Inc.
254 East Hacienda Avenue | Campbell, CA 95008 USA
+1.408.841.4500 or US toll-free +1.877.370.3802

March 25, 2018

Elliott Bickerstaff
Mississippi Department of Environmental Quality
Air Quality Division
P.O. Box 1677
Mississippi City, OK 73101-1677

RE: Comments on Proposed Mitigation Plan for the Volkswagen Environmental Mitigation Trust

ChargePoint is pleased to provide written comments to the State of Mississippi regarding the best use of funds stemming from the VW settlement and the State's allocation from the Environmental Mitigation Trust. The Trust funds provide a significant opportunity for the State to mitigate the environmental harm VW diesel vehicles caused, as well as advance key transportation segments that produce long-term benefits to the State and its communities.

In summary, ChargePoint commends Mississippi for committing 10% of its Trust allocation towards smart, light-duty electric vehicle (EV) charging infrastructure, and recommend consideration at the maximum 15%. We recommend the State consider prioritizing investment into projects utilizing electricity as a fuel and that utilize a standard connector. We believe that this investment in transportation electrification significantly contributes to the NO_x mitigation goals of the Environmental Mitigation Trust, and NO_x reductions from charging sessions are easily and empirically calculable. Moreover, funding for EV infrastructure is needed to meet the demands of today's 760 EV drivers in Mississippi, let alone support the exponential growth of EVs in years to come. In a state that currently has just 152 public charging spots, this small portion of the investment could support over 400 additional public charging stations deployed in communities across Mississippi.

ChargePoint is the largest electric vehicle (EV) charging network in the world, with charging solutions for every charging need and all the places EV drivers go: at home, work, around town, and on the road. With more than 61,000 independently-owned charging spots and thousands of customers nationwide, ChargePoint drivers have completed more than 51 million charging sessions, saving upwards of 55 million gallons of fuel, and driving more than 1.3 billion electric miles. In addition, there are currently more than 20 ChargePoint public charging spots in the State of Mississippi.

Recommended Eligible Mitigation Projects in Mississippi: EV Charging and Electrification

ChargePoint strongly recommends that Mississippi consider committing the maximum allowable 15% for light-duty electric vehicle charging. The State's investment of just 15% could contribute to the deployment of nearly nine hundred charging spots. A simple rebate program providing $7,000 per dual port Level 2 charging station would support 896 new charging spots.

Example:

- $1,477,000 Trust Funds ÷ $7,000 rebate per dual port charging station = **211 dual port charging stations**

- 211 dual port charging stations x 2 charging ports on each station = 422 **charging ports**

A rebate program can be applied to all property types, carries low administrative burden, and leverages private sector investment. In fact, many states have made an investment in EV charging a core part of draft and final plans.

There are several key reasons for Mississippi to maintain its support 15% for EV charging infrastructure:

1. 15% for charging infrastructure could deploy nearly four hundred charging spots across Mississippi.
    - Charging infrastructure is the most cost-efficient category for investment under the Trust.
    - EV charging stations can be deployed flexibly, with deployments easily tailored to State priorities and leveraging strong private sector demand.
    - Smart charging can give the State real-time insights into EV charging and transportation trends.
    - Within months, hundreds of charging stations would be installed and fully operational, and updated constantly over air.

2. 15% for charging infrastructure would provide a measurable and significant annual NOx mitigation.
    - EV charging is the only category that offers real-time NOx mitigation measures.
    - Captures data on kilowatt-hours consumed, which can be easily converted to electric miles driven.
    - Charging infrastructure is the only eligible mitigation action that will increase NOx mitigation over time with greater EV adoption and a cleaner electric grid.

3. 15% for charging infrastructure will make Mississippi a leader in advanced transportation technologies.
    - 40+ States have already determined electric vehicle service equipment (EVSE) as part of their draft or final beneficiary mitigation plans, many at the maximum level.
    - Current infrastructure is not adequate to meet the needs of today's EV drivers and prepare for future projected growth.
    - States are currently competing for preparedness in electrification, and Trust funds provide a unique opportunity Mississippi to lead and become a target for investment.

4. 15% for charging infrastructure is part of a resilient transportation sector.
    - Charging is powered by the grid and keeps transportation fuel local.
    - Transportation fuel diversity mitigates risks for Mississippi and its drivers.
    - Infrastructure is currently needed along evacuation routes, in order to address range security at a time of emergency.

Designing the right EV charging program for Mississippi under the Trust

Light-duty electric vehicle infrastructure funding programs can be flexible in how they are distributed, whether they are solely responsive to the demand from the market and site hosts, targeted to specific use cases and geographically based allocations, or a hybrid of factors for distribution.

Light-duty electric vehicle charging infrastructure projects can align with the State's goals for the EV charging sector and complement existing infrastructure. Existing deployments in Mississippi have focused around key municipalities and areas of higher density, but there are gaps to address in order to promote broader EV adoption in all communities. DEQ 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. Additionally, the program can be structured to concentrate on local emissions reductions and prioritize specific non-attainment zones.

In general, ChargePoint recommends that DEQ focus on Level 2 charging stations for municipalities and local points of interest, where people may dwell for longer periods of time. Rebate programs are effective in expediting charging station deployments and attracting a wide variety of site hosts. Rebate programs can be targeted to specific areas such as county, zip code, or city. Eligible regions or areas can be prioritized by NO_x emissions estimates, socioeconomic factors, traffic flows, and other factors. Rebate programs are typically first-come, first-served and support accelerated deployment with low administrative effort. In ChargePoint's experience, allowing for site hosts (ex. workplaces and retail establishments) to own and operate charging equipment, have skin in the game with a financial cost share, and manage the charging at their sites will lead to the highest utilization and best deployment.

Should the State decide to include DC fast charging technologies, ChargePoint supports flexible incentive programs, designed to accommodate a range of sites and circumstances. These deployments should be evaluated on a case-by-case basis. Detailed evaluation criteria should be included in a competitive solicitation. For example, competitive grant program solicitations for DC fast charging projects can target specific corridors or areas. We believe these program designs will allow the competitive market for charging infrastructure to drive demand from eligible site hosts, while remaining responsive to the State's priorities for Trust funding.

EV Charging Technology: Make Smart Technologies a Standard Qualification

ChargePoint strongly recommends that the State make smart, networked charging features a prerequisite for EV charging program funding. Smart charging infrastructure is cloud-enabled to collect and report real-time data on charging sessions, including energy use, frequency and duration of sessions, pricing, and availability to drivers. There are several reasons for incorporating only smart charging in this program:

1. Data from smart charging sessions can be used, real-time, to report NOx emissions mitigation.
2. Smart charging stations display availability to drivers and appear on maps, which helps promote driver confidence and greater utilization.
3. Charging networks allow site hosts to set pricing to drivers, which can help the business case for installation of charging assets and incent good charging behaviors.
4. Data from charging stations can be aggregated on any level (single station, region, state) to give the State insights into charging habits and inform transportation and grid planning.
5. Networked charging stations include remote diagnostics and "remote start" capabilities.
6. Software and firmware updates are made over the air, eliminating the need for a technician to visit site for vehicle or standards compliance updates.

None of the above functionalities are available on non-networked stations, and we believe and our experience shows that networked features carry a range of benefits for states, utilities, site hosts, and drivers. In addition, we believe that all of the above functionalities should be considered as baseline eligibility criteria.

Conclusion

Thank you for your continued public engagement and consideration of our comments. ChargePoint looks forward to continuing to be a resource to the State of Mississippi as it designs a program to bring the benefits of electrification to communities across the State.

Sincerely,

David Schatz
Director, Public Policy
ChargePoint

Cooperative ENERGY

Post Office Box 15849
Hattiesburg, MS 39404-5849
(601) 268-2083

CooperativeEnergy.com

March 18, 2019

Elliott Bickerstaff
Mississippi Commission on Environmental Quality
Post Office Box 2261
Jackson, MS 39225

Re: State of Mississippi VW Beneficiary Mitigation Plan

Dear Mr. Bickerstaff,

On behalf of Cooperative Energy, I write to submit that Cooperative Energy has reviewed the proposed State of Mississippi Volkswagen Beneficiary Mitigation Plan. Cooperative Energy supports the Commission's allocation plans for funds from the Environmental Mitigation Trust, specifically the funds allocated for light-duty zero-emission vehicle supply equipment.

The allowance for funds to be used for acquiring, installing, operating and maintaining supply equipment for light-duty zero-emission vehicles directly supports new programs in progress at Cooperative Energy and would maximize the benefit of both the Volkswagen Mitigation Trust and the Cooperative Energy programs for state residents.

Cooperative Energy writes in support of this plan as proposed and encourages the Commission to proceed with the plan as written.

Sincerely,

Cooperative Energy

Sara Peterson

GENERAL MOTORS

Britta K. Gross Director
Advanced Vehicle Commercialization Policy
Environment, Energy & Safety Policy

General Motors Global Headquarters
MC: 482-C30-C76
300 Renaissance Center
Detroit, MI 48265-3000

March 22, 2019

Elliott Bickerstaff
Mississippi Department of Environmental Quality (MDEQ)
PO Box 2261
Jackson, MS 39225-2261

Subject: GM Comments relative to Mississippi's VW Settlement Beneficiary Mitigation Plan

Attention: Elliott Bickerstaff

General Motors LLC (GM) appreciates the opportunity to provide input on the VW Settlement Beneficiary Mitigation Plan for Mississippi. GM commends the Mississippi Department of Environmental Quality (MDEQ) for allocating 10% of the fund (equating to about $1mil) to increase the availability of critically-needed electric vehicle (EV) charging stations. In order to grow the EV market and attract even more advanced transportation technologies to the state, such as self-driving EVs, Mississippi needs to invest in a charging infrastructure network that addresses consumer and industry concerns. And to maximize the impact of limited state funds, it is important to invest strategically.

GM would encourage the TCEQ to directly engage key EV stakeholders in the development of a state-wide vision and plan for EV charging infrastructure. Key EV stakeholders include among others, automakers, the state's electric utilities, and ongoing EV infrastructure investments that impact Mississippi, such as Electrify America. We also suggest engaging stakeholders in neighboring states to help ensure the resulting EV charging infrastructure is as effective and visible to consumers as possible across the region. It's important to recognize that the quality of infrastructure placement is generally more important than the quantity of EV stations deployed. This means it is key to establish an overall vision and strategy for the placement of EV charging infrastructure, based on sound expert stakeholder input, that will result in an overall compelling "story" that will change consumers' perceptions and convince them that EV charging infrastructure is everywhere it needs to be. Once a strategic vision and plan for EV infrastructure in Mississippi has been developed, proposed infrastructure projects can be evaluated against the vision.

As a reminder of comments we provided last year to the MDEQ: 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. 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.).

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 Mississippi's low electricity prices mean that electric vehicles are an important economic driver for Mississippi. Again, we encourage the state to directly engage all 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 Mississippi. GM greatly appreciates Mississippi's commitment to support the strategic transition to transportation electrification and all efforts to help drive this emerging market.

Sincerely,

Britta K. Gross, Director
Advanced Vehicle Commercialization Policy
britta.gross@gm.com
(586) 596-0382

INSTITUTE FOR MARINE MAMMAL STUDIES

P.O. Box 207
Gulfport, MS 39502
Tel: (228) 896-9182
Fax: (228) 896-9183
www.imms.org

March 24, 2019

Elliott Bickerstaff
Contact at MDEQ for Public Comments on
State of MS VW Beneficiary Mitigation Plan

Subject: State of Mississippi's Proposed VW Beneficiary Mitigation Plan.

Dear Mr. Bickerstaff,

The Institute for Marine Mammal Studies (IMMS), a 501 (c) (3) nonprofit organization, is engaged in or for the purposes of public education, conservation, and research on marine mammals in the wild and under human care. IMMS serves as an important educational outlet for the Mississippi Gulf Coast, incorporating programs for conservation, education and research of marine mammals and their environment.

We are constantly trying to find ways and means necessary to improve marine lives on the coast of MS. We have realized that Diesel emissions – from both marine and land-based sources (boats, trucks, lifts, tractors, etc.) – have affected the lives of marine animals and plants. Additionally, hydrocarbons and their derivatives can enter the food chain and effect both humans and animals alike. IMMS played a significant role in the response to marine animals effected by the BP oil spill.

We are aware of the State's VW Beneficiary Mitigation Plan, and would like to not only participate in the program, and in this regard provide our comments as below.

A. Diesel vehicles and equipment used by non-profits, such as ours, should be allowed a 100% reimbursement for implementing technologies to mitigate diesel emissions. We are a 501(c)(3) organization, tax-exempt by Federal government, and we operate only for public benefit and not for private interests. We are also audited by the governments. Therefore, a full cost reimbursement to organizations like ours will only help us implement technologies to mitigate diesel emissions.

B. We are working with a new technology to mitigate diesel emissions and have been happy with the demonstration results. We will submit a full proposal when such proposals are solicited. At this time, however, we would like to emphasize that the choice of technology

should be left to the owner of the vehicle/equipment, and they should only be required to demonstrate that their installed technology effectively mitigates diesel emissions, particularly NOx. In other words, the BMP must be technology agnostic and must provide level playing field to all available technologies that are patented and can satisfactorily demonstrate their efficacy in mitigating diesel emissions. This way DEQ will find the best technologies for mitigation of diesel emissions in the state.

We are keen to participate in this program and demonstrate how our technology very effectively mitigates NOx emissions. We would greatly appreciate if the final rule will allow nonprofits, such as IMMS, to avail the funding opportunities for the VW program. Please keep us informed of the developments in this funding program as we are very interested in participating in the same.

Sincerely yours,

Moby Solangi, Ph.D.
President and Executive Director
10801 Dolphin Ln.
Gulfport, MS 39503
Phone: (228) 896-9182
Email: moby@imms.org

Public Comment on the MDEQ 2019 Proposed VW Mitigation Plan

Good Afternoon,

My name is Mart Shearer, a nearly lifelong citizen of Jackson, Mississippi. I reside less than two miles from I-55, and less than a quarter mile from the Canadian National railyard in Jackson, and have seen the results of diesel particulates on every white car I've owned. Both my wife and I are employees of the State, and both of us drive vehicles with plugs, one battery electric vehicle (BEV) and one plug-in hybrid electric vehicle (PHEV). My personal attention to energy and sustainability began as a teenager with the Arab Oil Embargo of 1973, followed by the "Energy Crisis" of 1979. In 2003, after comparing the VW Golf TDI and Toyota Prius sedan, we bought our first hybrid car, which proved its worth during the aftermath of Hurricane Katrina and the high gasoline prices immediately preceding the Great Recession of 2008.

Goals

The goals of the Mitigation Plan are outlined on p.6.

"3.0 Goals and Priorities
Mississippi's strategy for implementing the trust is to select projects that improve and protect ambient air quality by achieving the following high-level goals:
• Achieve significant and sustained reductions in diesel emission exposures throughout the state.

• Maximize the amount of diesel emissions reduced each year per dollar invested.

• Support projects that invest in the replacement of older diesel emission sources with cleaner alternatives.

• Support projects that invest in new technologies including ZEV sources."

Like the infamous Project Management Pyramid, where the manager is told, "You can have it good, fast, or cheap – pick two", it should be recognized that not all of these goals can be achieved without compromise or considering the length of time such projects may remain in service.

Concerns

I have several concerns regarding the Proposed VW Mitigation Plan.

First, recognizing that the Consent Decree for this plan has determined basic rules beyond our control, I must note that the amount of funding

available is limited by our relatively small population and limited sales of offending Volkswagen, A.G. diesels. As noted on page 1,

"The State of Mississippi is currently allocated $9,874,413.91 from the Environmental Mitigation Trust to fund EMAs. While Mississippi can request EMA funds up to the total amount allocated to it, it may only request payout of no more than one-third of its allocation during the first year or two-thirds of its allocation during the first two years."

With the state accepting proposals from all ten separate Eligible Mitigation Actions (EMAs) as noted on p.7,

"However, Mississippi intends to consider all projects that are allowable under the trust; thus, the estimated percentages are subject to change."

I believe there is real risk of atomizing the fund into parts so small that meaningful, long lasting change cannot be accomplished. It is well known that energy efficient devices have a higher up-front cost than older technologies, though their lifetime operating expenses make them more efficient. For example, and LED lamp may cost eight times more than an old incandescent light bulb at purchase, though it saves money over its life by lasting longer between replacements and consuming less energy. Likewise, electric school buses or electric city transit buses cost more than comparable diesel or hybrid models, but save money over their lives through lower maintenance and "fuel" costs. By slicing the funding pie into too many pieces, there may be inadequate funding to make meaningful impacts in any one area.

Second, the proposed plan gives preference to public-private partnerships to stretch the fund.

p.7 *"In order to maximize the benefit of the VW Mitigation Trust, Mississippi will give additional consideration to those projects offering matching funds above the minimum requirements allowed by the trust."*

In order for the public government to not favor one private business over another, it will be necessary to accept multiple bids from multiple companies. If multiple awards are made to prevent favoring one business or location over another, the savings from paying a smaller percentage of the total for the project may easily be lost. Further, equipment purchased, such as a Class 8 truck used by a private company may travel out of state, minimizing pollution reduction in state. For this reason, I do not believe any additional consideration should be given to private entities offering matching funds over using 100% for government projects.

Third, while reductions of Nitrogen Oxides (NOx) is the goal of the mitigation action, I believe it's important to note that the VW Group's excessive

pollution was caused by the light duty vehicles it sold, and not by any additional pollution from trains, ships, construction equipment, or airport handling trucks. Although the Consent decree has limited our response to the most significant source of NOx emissions in the state as noted on p.5,

"Fifty-five percent of the mobile source emissions are from vehicles such as light duty trucks and cars that are not eligible for funding."

We are capable of impacting the second leading source of on-road pollution

"On-road heavy-duty diesel vehicles are the largest source of eligible vehicle emissions in Mississippi, at 29% of total mobile source emissions..."

Therefore, in my opinion, priority should be given to funding for publicly owned, on-road vehicles such as school buses, public transit buses, and heavy and medium duty trucks operated by government agencies.

Fourth, I am disappointed by the State's proposal for EMA 9, "Light-duty zero-emission vehicles supply equipment". While the Proposal unabashedly proclaims on p.7,

"Mississippi anticipates using up to 15% of the funds available for allowable administrative expenditures."

MDEQ, by suggesting a 10% allocation of the Fund for EMA 9 has cut back the maximum 15% allowed under Appendix D-2 to the Partial Consent Decree, which states,

"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. Provided, however, that Trust Funds shall not be made available or used to purchase or rent real estate, other capital costs (e.g., construction of buildings, parking facilities, etc.) or general maintenance (i.e., maintenance other than of the Supply Equipment)."

https://www.vwcourtsettlement.com/wp-content/uploads/documents/DOJ/Approved%20Appendix%20D-2.pdf

So, you get your maximum allocation, but we don't get ours? Although the state lists the NOx reductions for this category as "NA", the installation of publically accessible electric vehicle supply equipment (EVSE) may be the only method allowing the state to tackle the leading cause of NOx emissions throughout the state – light duty diesel trucks and cars. Georgia and Tennessee already have a number of public EVSE in place, and Mississippi could rapidly move to join them. Using the 15% allowed, the state could place approximately 25 DC Fast

Chargers along major thoroughfares, approximately 50 miles apart. This would allow drivers of electric vehicles with Level 3 charging capability such as the Nissan Leaf or Chevrolet Bolt to drive throughout the state, or for BEV drivers from neighboring states to travel here. Since rapid charging will still take 30 minutes to one hour, drivers could be expected to spend some time at restaurants or public rest areas. If additional funding remained, publically accessible Level 2, 240v EVSE could be placed on State property where one could be expected to spend several hours, such as museums, stadiums, or other tourist attractions. Publically accessible charging at various state offices should also be considered for employees.

In brief, I would recommend a change in the allocations based primarily on EMA source of NOx emissions, utilizing the percent from ineligible light-duty vehicles to cover the EVSE and administrative portions. I would also remove any language giving preference to private partnerships, and utilize the maximum percentage allowed for EVSE infrastructure.

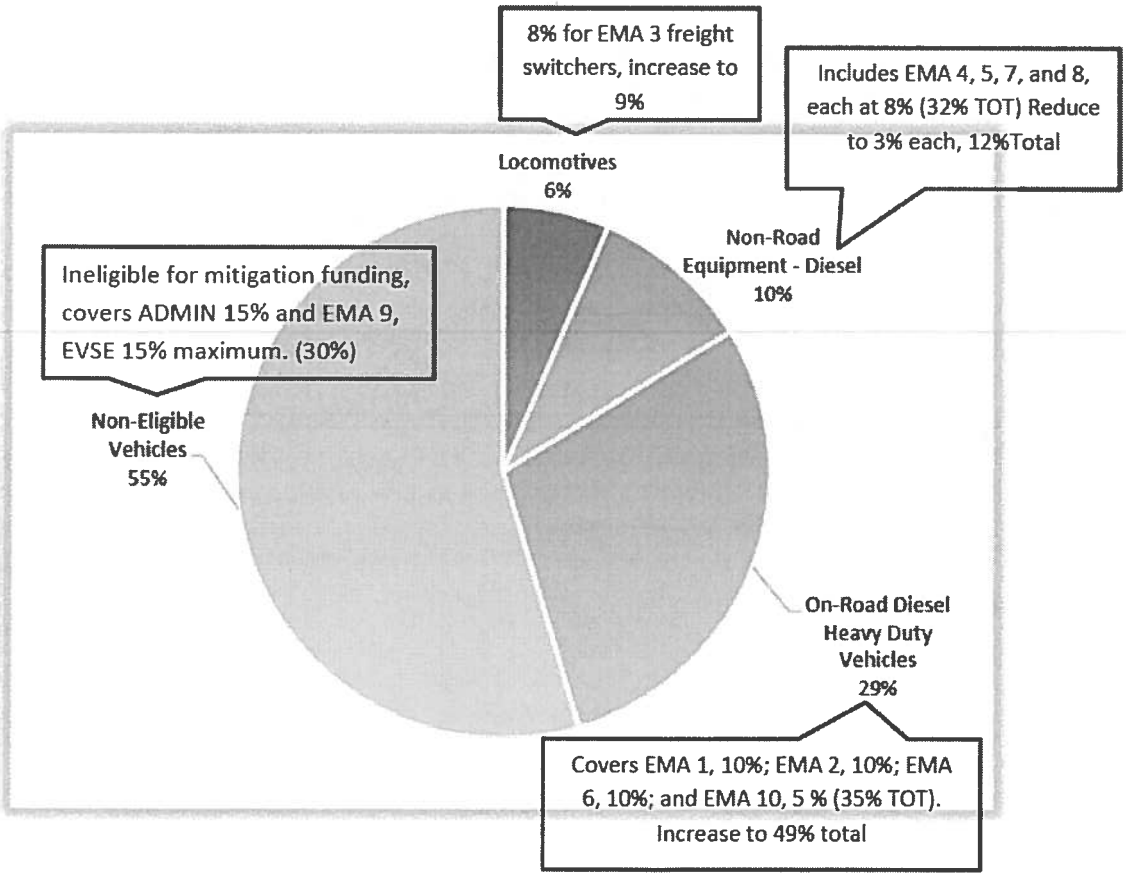


Figure 3. Mississippi NO_x Emission Sources for 2014.
(Source: 2014 National Emissions Inventory)

NGVAMERICA
Natural Gas Vehicles for America

400 North Capitol Street, N.W.
Washington, D.C. 20001
ngvamerica.org

March 14, 2019

Mr. Elliott Bickerstaff
Mississippi Department of Environmental Quality
P.O. Box 2261
Jackson, MS 39225

RE: NGVAmerica Comments on the Proposed Mississippi Volkswagen Beneficiary Mitigation Plan

Dear Mr. Bickerstaff:

Natural Gas Vehicles for America (NGVAmerica), the national trade association for the natural gas vehicle industry, respectfully submits the following comments to the Mississippi Department of Environmental Quality (DEQ) on its Proposed Volkswagen Beneficiary Mitigation Plan (Plan) for information as you finalize your Plan. These comments are in addition to the NGVAmerica comments submitted to you on May 10, 2017 (attached) regarding NGVAmerica's recommendations on how states can best use the Environmental Mitigation Trust (EMT or Trust) funds that each state will receive as part of the Volkswagen (VW) diesel emission settlement.

The VW EMT funds provide an extraordinary opportunity for Mississippi and other states to put significantly cleaner, lower-polluting vehicles on the road in public and private fleets. This funding ($9.87 million) can and should be used by Mississippi to continue its commitment to accelerating the use of cleaner, alternative fuels that offer a cost-effective alternative to funding diesel vehicles.

As shown in our VW Comment Letter submitted on May 10, 2017, natural gas vehicles (both LNG and CNG) offer the best solutions for the projects that will address the goals of the EMT, to reduce the most nitrogen oxide (NOx) for the least cost. Please see the updated (using the latest version of the Argonne Lab AFLEET emissions calculation tool) diesel, electric vehicle and natural gas vehicle emissions reductions comparisons on the attached NGVAmerica "Natural Gas is Now" flyer.

The latest natural gas engines are the only zero emission equivalent or 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.[1] The 0.02 g/bhp-hr NOx standard requires that new 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). Additionally, studies have shown that the near zero engines powered by natural gas perform at or better than their EPA tested rating, while new diesel engines may have in use emissions that are as much as 5 times higher than their EPA tested rating (see NGVAmerica's May 10th 2017 Comments).

[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).*

If renewable natural gas (RNG) made from organic waste is used, life cycle greenhouse gas emissions from NGVs are reduced further, potentially becoming carbon negative. Using RNG also creates environmental and economic development opportunities for energy created from wastewater, landfills, agricultural waste and other anthropogenic methane sources that may otherwise escape into the atmosphere as potent greenhouse gases.

In addition to the above on-road applications, natural gas is also capable of powering non-road applications such as freight switchers, other locomotives and marine vessels. For freight switchers, natural gas technology effectively provides what would be a Tier 5 emissions freight switcher (labeled Tier 4 until the U.S. EPA puts out the Tier 5 specifications) at Tier 4 diesel freight switcher pricing. Due to proven technology and increasing natural gas projects in rail and marine as well as the renewable consideration that the projects could use RNG, natural gas options best fulfill the goals of the DEQ.

NGVAmerica applauds the overall goals Mississippi has declared for the use of the VW Settlement funds, including significant NOx reductions and maximizing the amount of these reductions per dollar invested with a preference for cleaner alternative fuel vehicles. Using natural gas vehicles is key to achieving these goals.

The Proposed Mississippi Plan also states that the DEQ anticipates spending its Trust allocation across the ten categories that the Trust identifies, with approximately 51% going to on-road and off-road applications. Natural gas vehicles are commercially available in all the vehicle classes, marine and rail, thereby offering the best solutions today for addressing the goals of the EMT, delivering the most nitrogen oxide emission reductions for the least cost.

Current State Beneficiary Mitigation Plans

Forty-nine states have released Beneficiary Mitigation Plans and NGVAmerica has reviewed these plans and offered comments. The best state Plans limited diesel options and did not pick a preferred alternative fuel. Several states provide a relative parity for funding for the various fuels through their choice of percentage funding by fuel type. One model funds all alternative fuels at 40% of the vehicle cost for government and public entities, while private vehicles are funded at 25% of the vehicle cost for all alternative fuels.

The DEQ has not stated what the percent of cost of vehicle numbers will be for private and government projects. If the EMT percentages are followed there will be no achievement of any parity among fuels and diesel and electric projects will be promoted over other fuels. NGVAmerica recommends that since diesel does not perform to the EPA standard when in use at low speeds or idling, we recommend that diesel receive a lower (or no) funding amount than alternative fuels, and that the electric vehicle percentage be reduced.

Additional Options for Vehicle Scrappage

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

- Increase the options for scrappage beyond a strict replacement of a current fleet vehicle (e.g., allow a fleet to acquire an older vehicle from another fleet or allow a fleet to exchange one of its newer vehicles for another fleets older vehicle that is then scrapped)

- Since the Trust does not specify the fuel of the scrappage vehicle, allow natural gas vehicles that meet the year criteria to be scrapped and replaced with new NGVs

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

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

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

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

It should be noted that the U.S. EPA Diesel Emissions Quantifier (EPA DEQ) tool is not current in its underlying assumptions and data for today's engines and in-use emissions, therefore NGVAmerica requests that the DEQ use the ANL HDVEC tool (derived from the AFLEET tool) for all applicable categories of projects, since the data is current, easy to use and was created for VW projects. NGVAmerica is available to discuss the operation of this tool and show comparisons between it and the EPA DEQ if the DEQ desires to do this.

Summary of NGVAmerica's Recommendations for EMT Funding

- ✓ Given that the EMT was created because of NOx pollution associated with non-compliant diesel vehicles, we believe that the funding should be set aside for clean, ***alternative fuel*** **vehicle projects that focus on maximizing NOx reduction for the funds spent**
- ✓ Provide a larger incentive and greater overall funding for medium- and heavy-duty engines that deliver **greater NOx reductions than currently required** for new vehicles and engines
- ✓ Target funding for technologies that have demonstrated the ability to deliver actual **lower in-use emissions** when operated in real-world conditions
- ✓ Provide the **highest level of funding to applications that produce the largest share of NOx emissions** (in most regions this means prioritizing for short-haul, regional-haul and refuse trucks)
- ✓ Prioritize funding for **commercially available products that are ready for use**
- ✓ Prioritize funding for **clean vehicles rather than fueling infrastructure**
- ✓ **Scale funding to incentivize the cleanest engines available** – at a minimum, provide parity among alternative fuels by following a version of the Colorado VW Plan that funds non-diesel alternative vehicles in the private sector at 25% of the cost of the vehicle and public sector vehicles at 40%
- ✓ Ensure that funding incentivizes adoption by **both public and private fleets**
- ✓ Prioritize projects that include **partnerships that provide a match** such as a CNG or LNG station being built in locations that will receive the VW funding

- ✓ **Accelerate the funding** in the early years to maximize the NOx reduction benefits
- ✓ Use vehicles emissions measurement tools that reflect current technologies and performance under real world operation duty cycles – **Argonne National Laboratory's AFLEET tool and HDVEC tools** are the most current tools available

Compared to other alternative fuels and to diesel vehicles, natural gas vehicles that are commercially available today, offer the best solution for addressing the goals of the EMT. The DEQ recognizes the value of cost-effective NOx reductions that NGVs provide, and that these emission reductions can be realized today.

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

Sincerely,

Daniel J. Gage
President

SIERRA CLUB

March 26, 2019

Elliott Bickerstaff
Mississippi Commission on Environmental Quality
P.O. Box 2261
Jackson, MS 39225

Re: Comments of Sierra Club on the Mississippi Commission on Environmental Quality's Proposed Volkswagen Beneficiary Mitigation Plan

Sierra Club appreciates the opportunity to comment on the Mississippi Department of Environmental Quality's ("DEQ") Volkswagen Beneficiary Mitigation Plan ("Proposed Plan"). We thank DEQ for their work on the plan to determine best uses of the Environmental Mitigation Trust ("EMT") funds, and respectfully submit these comments.

The EMT presents Mississippi with a unique opportunity to reduce NOx and other polluting vehicle emissions, to improve the health of all Mississippi residents, and to accelerate the transition of our transportation sector towards cleaner, more cost-effective vehicles, which will both improve air quality and help drive economic growth in Mississippi.

DEQ should ensure that investments made through the EMT are forward looking, transformative, and cost-effective over vehicles' useful lives, while meaningfully reducing NOx and other polluting emissions. Given those objectives, we believe several elements of the Proposed Plan are positive, and offer recommendations to magnify the impact of the EMT funds.

First, we offer our strong support for the following elements of the Proposed Plan:

- Sierra Club supports DEQ's goals of achieving significant and sustained reductions in diesel emission exposures, maximizing the amount of diesel emissions reduced each year per dollar invested, supporting projects that invest in the replacement of older diesel emissions sources with cleaner alternatives, and supporting projects that invest in new technologies including ZEV sources; and

- Sierra Club likewise supports DEQ's use of trust finds for the state's nonfederal voluntary match for Diesel Emission Reduction Act ("DERA") grants.

Second, we offer the following recommendations to improve the Proposed Plan and maximize the impact of EMT funds:

- DEQ should not expend any mitigation funds on fossil-fueled vehicles and equipment, and should instead direct funds towards market-ready electric technologies;
- DEQ should not use mitigation trust funds on administrative expenditures, which would otherwise minimize the emission benefits of the selected programs;
- DEQ should consider concentrating EMT funds for projects in Hancock, Harrison, and Jackson counties; and
- DEQ should make its project selection process open to public comment and participation, and should narrow the scope of considered projects.

We explain each recommendation in more detail below.

I. Rather Than Spend Mitigation Funds on Fossil-Fueled Vehicles and Equipment, DEQ Should Direct Funds Towards Market-Ready Electric Technologies Available for Eligible Vehicles and Equipment

Although DEQ rightfully aims to achieve significant and sustained reductions in diesel emissions and maximize the amount of diesel emissions reduced each year per dollar invested, DEQ's consideration to replace diesel vehicles with "new diesel" vehicles would be a misuse of mitigation funds and prevent DEQ from achieving its goals. Instead, DEQ should use funds to replace existing old and highly-polluting vehicles and equipment with all-electric vehicles or equipment. Funds should be focused on the eligible categories responsible for the largest sources of emissions and the most cost-effective replacements. Heavy duty diesel road vehicles are the second largest contributors of NOx pollution in the state, followed by non-road diesel equipment.[1] Sierra Club suggests DEQ focus its funds on replacing these vehicles and equipment with all-electric vehicles and equipment, which has lower comparative costs than diesel replacements.

a. On-Road Heavy Duty Diesel Vehicles

On-road heavy duty diesel vehicles account for 29 percent of Mississippi's NOx emission sources.[2] Given this large percentage, as well as the large amount of EMT funds available for this category, DEQ should focus its efforts on shrinking these emissions by funding projects that replace old heavy-polluting trucks and buses with all-electric replacements. By directing funds towards electric replacements, DEQ can work towards its goal of

[1] DEP'T OF ENVTL. QUALITY, STATE OF MS VOLKSWAGEN BENEFICIARY MITIGATION PLAN—PROPOSED 5 (2019) (detailing the NOx emission sources in Mississippi, the first of which are light duty trucks and cars that are not eligible for VW funding).
[2] *Id.*

achieving significant and sustained reductions in emission exposures, while also improving the health of vulnerable residents.

i. Electric Trucks

Electric trucks are a smart option for EMT funds and have the opportunity to provide great NOx emission reductions for the state of Mississippi. Electric medium duty trucks (class 4-6) are widely used and in active service on the road today. With plummeting battery costs, heavy duty and long haul (Class 7 and higher) electric vehicles are already in pilots and on their way to market. Class 4-7 diesel trucks are eligible for EMT funds. These trucks weigh between 14,001 and 33,000 pounds and include, but are not limited to, delivery trucks, box trucks, beverage distribution trucks, rack trucks, and refuse vehicles.[3]

1. Electric Trucks are already in use by businesses across America.

Staples, Frito-Lay, FedEx, UPS, and Coca-Cola are a few of the private firms that successfully integrated on-road medium size electric trucks into their fleets.[4] Electric medium trucks are available from ZeroTruck, Boulder Electric Vehicle, First Priority GreenFleet, and Freightliner Customer Chassis Corp.[5] These companies offer a number of configurations, primarily for localized/urban (so-called "last mile") delivery and goods/refuse hauling. Because of limited battery range—typically a 100-mile maximum—today's electric medium duty trucks are most effectively deployed in urban or short haul settings.[6]

Larger auto manufacturers are also developing these technologies to meet both growing market demand and environmental regulations. Mercedes unveiled its Urban eTruck concept[7] as well as its first fully electric heavy-duty truck.[8] Tesla similarly indicated its

---

[3] The Partial Consent Decree allows funding for Class 4-7 Local Freight Trucks with model years 1992-2006 unless state regulations already require upgrades to 1992-2006 model years. For a description of truck classes *see* STACY C. DAVIS, ET AL., 2015 VEHICLE TECHNOLOGIES MARKET REPORT 109 (2016), available at https://info.ornl.gov/sites/publications/Files/Pub62145.pdf.

[4] *See* Sean Lyden, *The State of All-Electric Trucks in the U.S. Medium-Duty Market*, GREEN FLEET (Jan. 6, 2014), https://www.greenfleetmagazine.com/155596/the-state-of-all-electric-trucks-in-the-u-s-medium-duty-market.

[5] *See e.g.*, *Specs*, ZEROTRUCK, http://zerotruck.com/our-fleet/ (last visited Mar. 26, 2019); *Models*, BOULDER ELECTRIC VEHICLE, http://www.boulderev.com/models.php (last visited Mar. 26, 2019); *ABLE*, FIRST PRIORITY GREENFLEET, https://www.1fpg.com/able (last visited Mar. 26, 2019); *Eco Initiatives*, FREIGHTLINER CUSTOM CHASSIS, https://www.freightlinerchassis.com/eco-initiatives/ (last visited Mar. 26, 2019).

[6] Lyden, *supra* note 4.

[7] Stephen Edelstein, *VW e-Crafter, Mercedes Urban e-truck concept: electric vans for Europe*, GREEN CAR REPORTS (Sep. 28, 2016), http://www.greencarreports.com/news/1106348_vw-e-crafter-mercedes-urban-e-truck-conceptelectric-vans-for-europe.

[8] Danielle Muoio, *Mercedes-Benz just revealed its first fully electric truck*, BUSINESS INSIDER (Sep. 21, 2016), http://www.businessinsider.com/mercedes-electric-urban-truck-photos-2016-9.

intention to apply its all-electric technology to the heavy-duty truck market.[9] Both companies are focusing on larger Class 7/8 Heavy Duty trucks, meaning that the technology may become available within the ten-year lifespan of the EMT.

2. Electric trucks save money compared to their diesel counterparts.

Converting to electric medium trucks makes economic sense. A 2013 study placed the total cost savings of electric versus diesel truck ownership at 22%.[10] That study assumed a cost premium of $25,000 to $37,000 for electric compared to diesel trucks. Notably, since that study was published, battery prices have dropped from $625/kWh, the value used in the study, to under $200/kWh.[11] Because the up-front cost of an electric truck is significantly influenced by the cost of the battery pack, the study likely understates current lifetime cost savings of switching to electric trucks.

Electric delivery trucks also offer significant savings in fuel and maintenance costs as compared to diesel vehicles. Fuel cost savings from switching to electric trucks are tremendous. For example, diesel costs between $2-3 per gallon[12] and "last mile" diesel vehicles are extremely inefficient: the average fuel economy ranges from 4.6 MPG to 9.6 MPG depending on route characteristics.[13] Electricity prices average approximately $1.29 per gallon of diesel equivalent, though prices vary by region and electric utility provider. Electric delivery trucks average between 16.7 MPGe and 34.3 MPGe for those same routes.[14]

Electric trucks also save significant maintenance costs over their lifetime. For example, a diesel "last mile" truck registers maintenance costs around $0.22/mile.[15] These costs include oil changes, brake repairs, belt replacements, and regular inspections. An electric delivery truck, by contrast, costs only $0.056-$0.111/mile.[16] Electric trucks simply have fewer parts to replace and repair. Additionally, electric drive trains and regenerative braking reduce wear and tear on remaining parts like brake pads. Because delivery trucks make frequent stops and travel in congested urban areas, brakes are historically one of the

---

[9] Joseph White & Paul Lienert, *Musk 'master plan' expands Tesla into trucks, buses and car sharing*, REUTERS (Jul. 20, 2016), http://www.reuters.com/article/us-tesla-masterplan-idUSKCN1002Q4; *Semi*, TESLA, https://www.tesla.com/semi (last visited Mar. 26, 2019).

[10] Dong-Yeon Lee, et al., *Electric Urban Delivery Trucks: Energy Use, Greenhouse Gas Emissions, and Cost-Effectiveness*, 47 ENVTL. SCIENCE & TECH. 8022 (2013).

[11] John Voelcker, *Electric-car battery costs: Tesla $190 per kwh for pack, GM $145 for cells*, GREEN CAR REPORTS (Apr. 28, 2016), http://www.greencarreports.com/news/1103667_electric-car-battery-costs-tesla-190-per-kwh-forpack-gm-145-for-cells. The decreases have not been as significant for larger electric vehicles which rely on different battery chemistry than electric passenger vehicles. *See Technology Assessment: Medium and Heavy-Duty Battery Electric Trucks and Buses, Draft*, CALIFORNIA AIR RESOURCES BOARD V-3 (Oct. 2015).

[12] Average national price as of March 25, 2019 was $3.080/gallon, but varies greatly with underlying crude oil prices, see http://www.eia.gov/petroleum/gasdiesel/.

[13] Lee, et al., *supra* note 10, at 8027.

[14] *Id.*

[15] *Id.* at 8025.

[16] *Id.*

most frequent and expensive costs. With electric drive trains, brake repairs can be reduced by 20-30%.[17]

3. Electric trucks reduce air pollution.

Diesel powered class 4-7 trucks omit, on average, between 4.35 and 7.47 grams of NOx per mile traveled.[18] Electric vehicles have zero tailpipe emissions. Converting to electricity therefore significantly impacts local air pollution. Additionally, from a well-to-wheels perspective, electric delivery trucks can reduce greenhouse gas emissions by 27-61%, and they keep improving their environmental performance as our electricity grids get cleaner and cleaner.[19]

Pollution from class 4-7 trucks stems from their unique operational requirements. Many of these vehicles register significant idling times, during which they continue to pollute without any additional vehicle miles traveled. A diesel truck uses between 0.40 and 0.85 gallons of diesel per hour of idling.[20] This costs operators money and contributes to air pollution. To address this issue from long-haul trucks states have electrified truck stops.[21] However, this has not addressed the issue of idling in the local freight and parcel delivery fleets. It is important to address these emissions because they have a tendency to occur in populated urban and suburban settings. Electric vehicles can idle without emitting, and have more efficient start-up/shut-down abilities that may further reduce the need to idle.

ii. Electric Buses

Electric buses are another smart use of EMT funds and also have the opportunity to provide great NOx emission reductions for the state of Mississippi. In its proposed plan, DEQ allows for the replacement of old diesel buses with "new diesel" buses. However, DEQ should instead only replace old buses with electric buses because it is more cost effective and provides for the biggest reductions in air pollution and greenhouse gas emissions from available technologies.

1. Electric buses already have lower comparative lifetime costs than diesel buses

Despite a potential up-front cost premium to purchasing an electric bus over a diesel, compressed natural gas ("CNG") or hybrid bus, electric buses are already a cheaper, more cost effective vehicle. As the Argonne National Laboratory's AFLEET model demonstrates, electric buses offer a total lifetime cost that is significantly lower than

---

[17] *Id.*

[18] U.S. EPA OFFICE OF TRANSPORTATION AND AIR QUALITY, AVERAGE IN-USE EMISSIONS FROM HEAVY-DUTY TRUCKS, 5 (2008), available at https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EVY6.PDF?Dockey=P100EVY6.PDF.

[19] Lee, et al., *supra* note 10, at 8028–29. This variation depends on the operational characteristics of the diesel truck being replaced. If a diesel truck runs a small route and uses less fuel/day, then there are less GHGs to reduce. *Id.*

[20] DAVIS, ET AL., supra note 3, at 123.

[21] *Id.* at 124.

diesel, CNG, or hybrid alternatives.[22] Specifically, nationwide per bus annual operation costs are approximately $55,000 for diesel, $72,000 for CNG, and $90,000 for hybrid. By contrast, zero-emission bus fuel and maintenance costs are substantially lower, at only $15,000 per year per bus.

Even with the greater purchase price, current analysis using Argonne National Laboratory's AFLEET Model demonstrates that zero emission electric buses have a total cost of ownership 21% lower than new diesel buses. Maintenance costs for electric buses are between 70% and 79% lower than for CNG and new diesel buses respectively, contributing to significant cost savings over the lifetime of a bus. Based on currently reported data, each all-electric bus will save Mississippi's transit agencies over $200,000 as compared to a new diesel bus purchase.

Moreover, as this electric bus technology continues to develop, all-electric bus up-front capital costs will continue to drop, whereas CNG and diesel bus capital cost trends are continually increasing.[23] In addition, a lifecycle analysis using data compiled by the California Air Resources Board in 2016 shows that hybrid diesel-electric buses have a total cost of ownership of $1,909,847, or over $700,000 greater than an electric bus.

Specific to the Volkswagen Settlement, agencies are instructed to demonstrate their anticipated NOx reductions as a result of their state's EMT investments. Many agencies are in search of the investment that results in the greatest NOx lb/$ ratio, but they are only considering the upfront purchase costs in these calculations. Accordingly, when the total lifetime costs are considered, the bus technology with the greatest NOx lb/$ ratio is a zero-emission bus.

As manufacturing of electric buses scales up, and as battery costs—the most expensive part of an electric vehicle—plummet over time, zero-emission bus prices have and will continue to fall rapidly. A recent California Air Resources Board study shows that every year the price premium for zero-emission buses decreases and, by 2022, they will be at cost parity with and continue to decrease as compared to diesel buses.[24] Therefore, every new bus bought will continue to shift the premium down. Using EMT funds to invest in electric buses now will place additional downward pressure on cost premiums and set the state for future procurement.

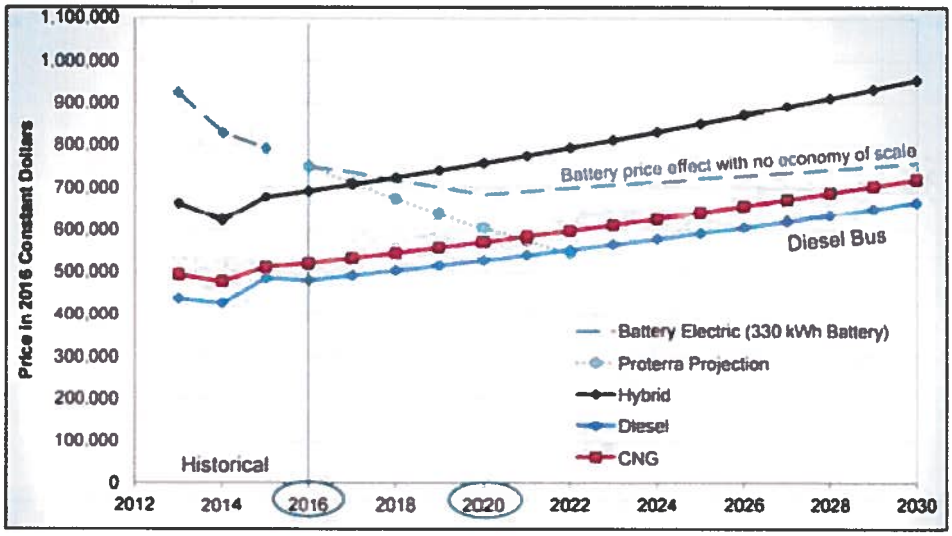
---

[22] AFLEET is a tool developed by Argonne National Lab to examine light-duty and heavy-duty vehicles' petroleum use, greenhouse gas and air pollutant emissions and costs of ownership. *See Welcome to AFLEET*, ARGONNE NATIONAL LABORATORY , https://afleet-web.es.anl.gov/home/.

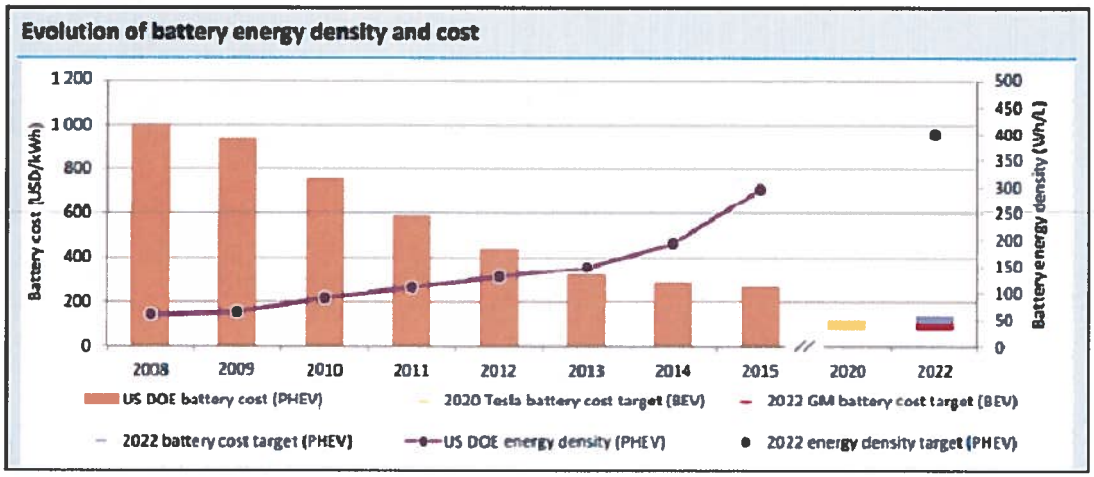
[23] *Total Cost of Ownership to Advance Clean Transit*. CALIFORNIA AIR RESOURCES BOARD (Oct. 4, 2016), https://www.arb.ca.gov/msprog/bus/4thactwgmtng_costs.pdf.

[24] *Id.*

Bus Price Projections (Source: Total Cost of Ownership to Advance Clean Transit, CARB 2016)



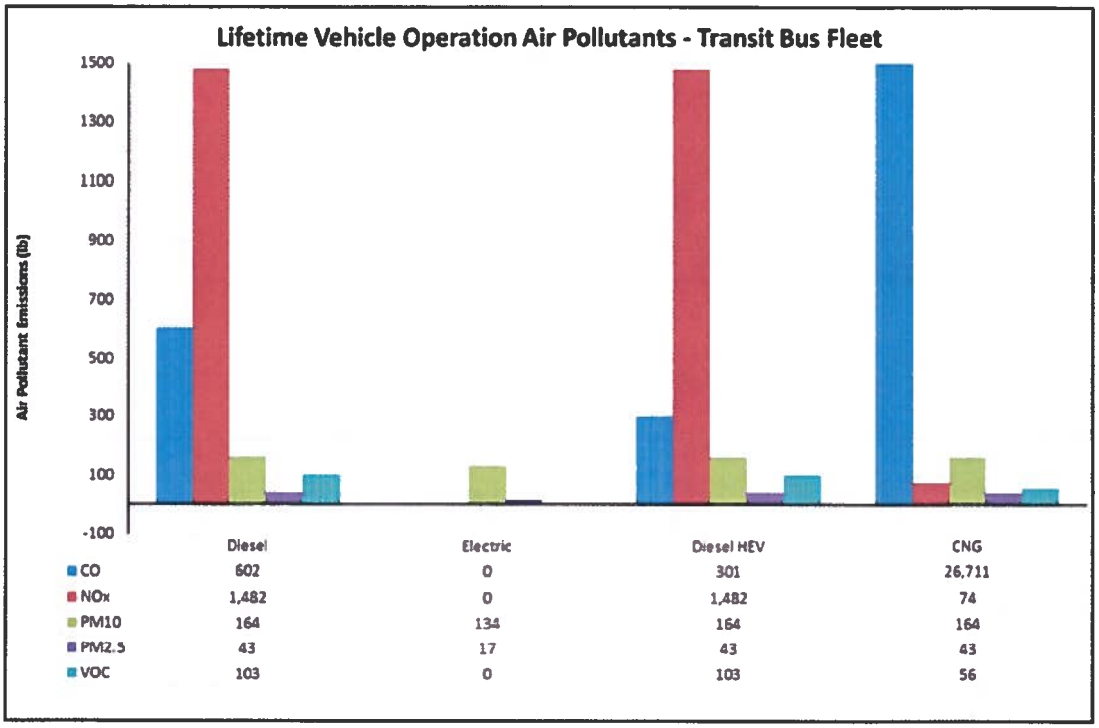
In just three years, we have already seen a significant decrease in cost, and by 2022, Proterra and other electric bus companies project battery costs will decrease by over 30 percent. Cheaper battery costs plus $40,000 in savings per year as compared to diesel buses and $57,000 per year as compared to hybrid buses make electric technology a truly cost-effective option.

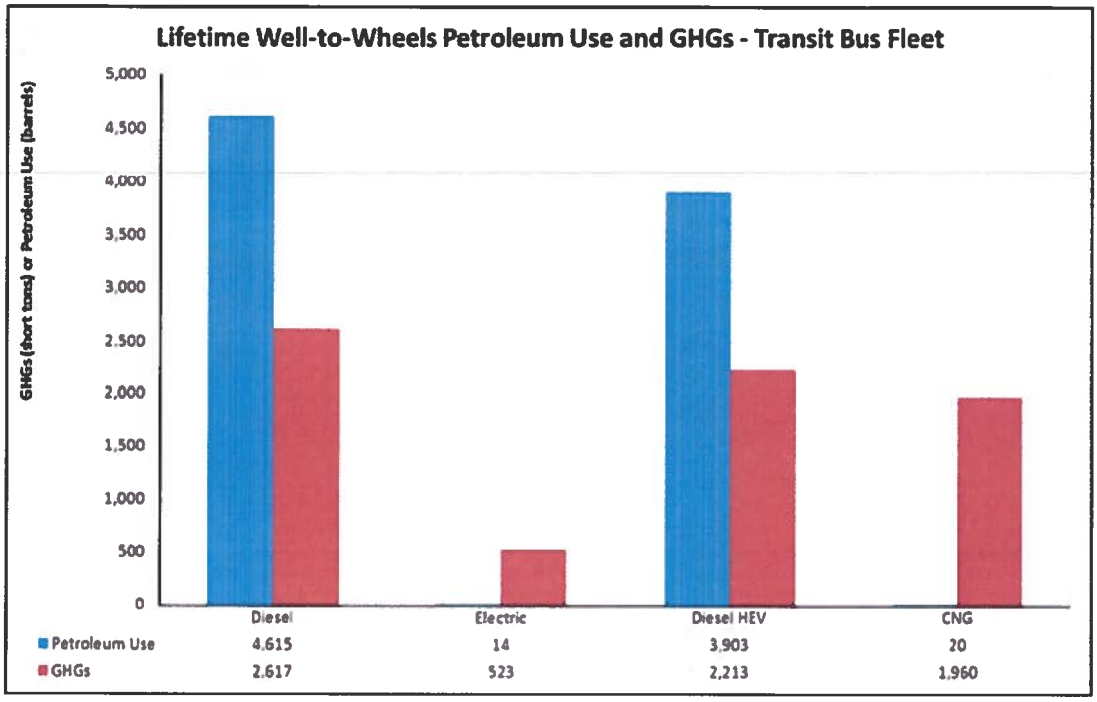


2. A switch to electric buses would deliver significant air quality and environmental benefits, addressing both critical smog and climate issues.

Electrifying Mississippi buses will also deliver critical public health and environmental benefits. This is particularly important for those areas with ozone levels close to NAAQS standards, where public health problems due to air quality likely still exist. Below,

AFLEET modeling illustrates drastic differences between lifetime emissions of criteria pollutants and greenhouse gases across electric, diesel, and CNG buses.





3. 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 United States.[25]

Eliminating school bus tailpipe 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.[26] 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)[27] 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 and throughout the summer (vehicle-to-grid technology).[28]

The purchase price of electric school buses is currently about three times that of conventional buses ($300,000 versus $100,000). However, as with electric transit buses, the purchase price of these buses will continue to fall in future years as vehicle and battery prices drop. Moreover, present-day operating and maintenance savings are not exclusive to transit buses. Electric school buses are in use by a number of municipalities throughout the country[29] and are ideal fits for electrification. Buses typically operate two shifts each day, once in the morning and again in the afternoon. Down time between shifts allows buses to fully recharge. In King County, California, two electric school

---

[25] *Asthma and Children Fact Sheet*, AMERICAN LUNG ASSOCIATION, https://www.lung.org/lung-health-and-diseases/lung-disease-lookup/asthma/learn-about-asthma/asthma-children-facts-sheet.html (last updated May 24, 2018); *Asthma in the US*, CENTERS FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/vitalsigns/asthma/index.html (last visited Mar. 25, 2019).

[26] A landmark US study has also linked diesel exhaust exposure to lung cancer. Michael D. Attfield, et al., *The Diesel Exhaust in Miners Study: A Cohort Mortality Study with Emphasis on Lung Cancer*, 104 J. NAT'L CANCER INST. 869 (2012).

[27] Bill Griffith, *Concord's Electric School Bus is Leading the Clean Energy Charge*, BOSTON GLOBE (Nov. 30, 2016), https://www.boston.com/cars/cars/2016/11/30/concords-electric-school-bus-is-leading-the-clean-energy-charge.

[28] Joel Patel, *Lion Bus Unveils Electric School Bus, Blue Bird to Follow*, HYBRID CARS (Feb. 2, 2017), http://www.hybridcars.com/lion-bus-unveils-electric-school-bus-blue-bird-to-follow/.

[29] *See, e.g.*, James Ayre, *Massachusetts Puts $1.4 Million into Electric School Bus Pilot Program*, CLEAN TECHNICA (Aug. 16, 2016), https://cleantechnica.com/2016/08/16/massachusetts-puts-1-4-million-electric-school-bus-pilot-project/; Nicole Schlosser, *Can Electric School Buses Go the Distance?*, SCHOOL BUS FLEET (May 23, 2016), http://www.schoolbusfleet.com/article/713421/can-electric-school-buses-go-the-distance (providing an overview of state and local pilot projects); Larry Hall, *Tech: The Yellow School Bus Is Going All Electric*, CLEAN FLEET REPORT (Mar. 26, 2016), http://www.cleanfleetreport.com/tech-yellow-school-bus-going-electric/.

buses were estimated to save roughly 16 gallons of fuel per bus per day. This amounted to an annual fuel saving of over $11,000 per bus.[30]

b. Non-Road Diesel Equipment

Non-road diesel equipment is the second largest eligible source of NOx emissions in Mississippi at 10%. Beyond replacing old heavy-polluting diesel vehicles, the EMT fund also allows states to apply funding towards non-road diesel equipment. Based on Mississippi's geography, and the estimated NOx emission reductions per vehicle or piece of equipment, Sierra Club also recommends DEQ increase its consideration of funding projects that reduce emissions from ferries and tugs, as well as ocean going vessel (OGV) shore power.

DEQ estimates the NOx emission reductions ferries and tugs would amount to 4.15 tons per vehicle/piece of equipment. This is much larger than emission reductions per vehicle for trucks and buses. While the cost of replacing a diesel-fueled ferry or tug could likely exceed the costs of buses and trucks, DEQ should consider raising its anticipated percentage of funds for projects relating to ferries and tugs in order to maximize the amount of diesel emissions reduced per dollar invested.

As another opportunity for EMT funds to accelerate electrification, DEQ should consider the feasibility of shore-to ship power at its commercial ports. This technology eliminates the need for ships to self-produce electricity while in harbor, a requirement that is typically met by burning heavy bunker fuel in on-board auxiliary boilers. Components of such systems eligible for reimbursement are limited to cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution.[31] EPA estimates average reductions in NOx emissions by 62.1 to 89.9% depending on ship type, PM2.5 emissions by 62.0 to 89.4%, and exhaust CO2 emissions by 62.3 to 90.9%, when comparing shore vs. ship-based power generation.[32]

DEQ's estimate of NOx emission reductions for OGV shore power far exceed reductions for trucks and buses at 30 tons per vehicle/piece of equipment. Again, the funding for such reductions will likely greatly exceed those of trucks and buses. However, funding projects in this area will greatly support DEQ's goal of achieving significant and sustained reductions in diesel emission exposure throughout the state.

II. DEQ Should Maximize the Amount of Diesel Emissions Reduced Each Year Per Dollar Invested

Mississippi should capitalize on the opportunity afforded to it through the EMT by maximizing the amount of diesel reductions per dollar. Given the state's allocation of just

[30] Hall, *supra* note 29.
[31] Environmental Mitigation Trust Agreement for State Beneficiaries, Appendix D-2, United States District Court for the Northern District of California, Case No: MDL No. 2672 CRB (JSC), at 6 (Oct. 2, 2017) [hereinafter "Mitigation Trust Agreement"].
[32] U.S. ENVTL. PROT. AGENCY, NATIONAL PORT STRATEGY ASSESSMENT, EPA-420-R-16-011, 82 (Sept. 2016).

over $9 million from the EMT, it is even more critical for DEQ to wisely distribute its funds on projects that achieve significant and sustained diesel emission reductions. For this reason, Sierra Club strongly recommends DEQ not use any of the allotted funds on administrative costs and take advantage of other available opportunities to multiply the funding.

a. DEQ should not use funds on administrative expenditures.

In order to achieve its goal of maximizing the amount of diesel emissions reduced each year per dollar invested, DEQ should not use mitigation trust funds on administrative expenditures. Stated in the Proposed Plan, DEQ anticipates using up to 15% of the available funds for administrative expenditures. Of the roughly $9 million allocated to the state of Mississippi through the EMT, DEQ's anticipated administrative costs would amount to $1.3 million. DEQ assumes such large administrative costs because it allows any project to apply for funds. By narrowing the scope of possible projects to concentrate on areas most impacted by NOx and other emissions, and projects that will get the most reductions of NOx per dollar, DEQ can significantly lessen, if not eliminate, its anticipated administrative costs.

b. DEQ should take advantage of several opportunities to multiply remaining funding.

In order to achieve the most NOx reductions possible from EMT funds, DEQ should prioritize electrification over replacing vehicles with new diesel or alternative fuel vehicles. Not only does electrification prevent Mississippi from getting locked into future emissions by committing to more diesel or alternative fuel vehicles (which although lower than current emission levels, are higher than zero-emission electric vehicles), electrification opens up further potential funding sources. There are two ways the EMT funds may be leveraged for additional funding for electrification of the transportation sector and NOx emissions reductions: 1) using funds from the Diesel Emission Reduction Act ("DERA"); and 2) engaging in public-private partnerships.

i. DERA Funding

Sierra Club supports DEQ's use of funds for the state's non-voluntary match for DERA grants. States have the option to apply for Volkswagen funding through a partnership with the Federal DERA program, enacted by Congress in 2011 to help reduce diesel engine emissions nationwide. Through this suggested partnership of Volkswagen Settlement and DERA Programming, Mississippi could receive additional funding for electrification of its mobile sector. To achieve this, EMT funds may be used for the DERA Program's voluntary non-federal matching option. Specifically, we encourage Mississippi to apply for program funding through DERA from the EPA, and then use EMT funds to participate in the DERA voluntary match program. As a result, the EPA will increase their DERA Program funding by an additional 50%.

For example, suppose Mississippi submits a zero-emission transit bus program proposal and receives $200,000 through DERA. If the state matches this amount with $200,000 from EMT funds, the EPA will add a bonus $100,000 to the total program funding. Consequently, Mississippi would receive a total of $500,000 for its zero-emission transit bus proposal, as compared to the initial $200,000.

The goal of eligible DERA programs is to reduce vehicle or vessel NOx emissions, so many of the eligible programs are comparable to those outlined in the VW Settlement. There are some additional programs, however, included in DERA but not included in the Settlement. These include repowering non-road engines (e.g., agricultural irrigation pump engines, bull-dozer engines), building up Truck Stop Electrification (or "Electrified Parking Spaces"), and programming for increased Idle Reduction Technology. Ultimately, we support any action that will increase the available funds, so long as the funds are directed towards electrification of Mississippi's mobile source sector.

ii. Public-Private Partnerships

DEQ can use VW funds to leverage additional investment in electric vehicle-related assets through public-private partnerships. The VW Settlement expressly contemplates using EMT funds for both governmental and non-governmental asset investments.[33] For non-governmental asset investments, only part of the expenses can be recovered by the VW Settlement, as reflected in the table below, meaning that the remainder of the expense must be covered through other funds. Thus, DEQ can use EMT funds to incentivize matching investments in electric vehicle assets and charging infrastructure from private entities. For example, DEQ can use EMT funds to pay for 40% of the cost of a private corporation's electric bus or truck, such as a hospital or university, and the private corporation could pay for the remaining 60%. Another suggestion would be to further partner with Electrify America—an organization which is working to invest $2 billion into the nation's electric vehicle supply equipment infrastructure and has already begun implementing its second cycle of investments across the country.[34] DEQ could provide suggestions for specific site locations for consideration in Electrify America's second cycle of infrastructure investments[35] and work to coordinate investment decisions to achieve an even more robust charging infrastructure in the state.

Asset	Government	Private
New Electric Truck and Charging Infrastructure	Up to 100% covered by VW funds	Up to 75% covered by VW funds
New Electric Bus and Charging Infrastructure	Up to 100% covered by VW funds	Up to 75% covered by VW funds
New Electric Freight Switcher and Charging Infrastructure	Up to 100% covered by VW funds	Up to 75% covered by VW funds
New Electric Ferries and/or Tugs and Charging Infrastructure	Up to 100% covered by VW funds	Up to 75% covered by VW funds

[33] Mitigation Trust Agreement, *supra* note 2 at 2–10.
[34] Electrify America, *Our Plan*, https://www.electrifyamerica.com/our-plan (last visited Mar. 20, 2019).
[35] Electrify America, *Submissions*, https://www.electrifyamerica.com/submissions (last visited Mar. 20, 2019).

Ship to Shore Infrastructure	Up to 100% covered by VW funds	Up to 25% covered by VW funds
New Electric Forklift and Port Cargo Handling Equipment and Charging Infrastructure	Up to 100% covered by VW funds	Up to 75% covered by VW funds

III. Mississippi Should Consider Concentrating a Major Portion of the Funds in Hancock, Harrison, and Jackson Counties

Hancock, Harrison, and Jackson counties are adjacent to each other and form the state's border with the Gulf of Mexico. These three counties have the highest concentrations of ozone in the state and are close to reaching the ozone NAAQS. In addition, since these counties form the border with the Gulf of Mexico, they contain numerous ports for commercial imports and exports. Taking these considerations together, DEQ should consider concentrating its funding of projects in these counties.

a. Air quality monitors are not always correct and these counties may actually have public health problems.

While DEQ reports that Hancock, Harrison, and Jackson counties are in NAAQS attainment for ozone, the levels are close to NAAQS standards and public health problems due to air quality likely still exist in these areas. An attainment designation is not a foolproof determination of air quality since the limited and haphazard air monitoring system is not sufficient to determine where there are air quality problems. Further, EPA and the states rarely redesignate areas to nonattainment once they have been designated as in attainment.

EPA recognizes the limitations of monitoring as a way of assessing ambient pollution levels, especially with regard to harmful short-term exposures. Because of problems with the monitoring network, EPA indicated that it expected to largely rely on modeling instead of monitoring as the primary methodology for determining attainment with the new SO_2 NAAQS in areas with large point sources.[36] EPA has also noted that "even if monitoring does not show a violation," that absence of data is not determinative of attainment status absent modeling, and that, particularly for larger sources, monitoring in general is "less appropriate, more expensive, and slower to establish."[37]

b. Since these counties are concentrated together at the southern border of the state, along the Gulf of Mexico, DEQ should consider concentrating EMT funds for non-road equipment such as electric ferries and tugs, and ocean going vessel (OGV) shore power systems.

[36] Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35, 520, 35,370, 35,551 (describing dispersion modeling as "the most technically appropriate, efficient, and readily available method for assessing short-term ambient SO_2 concentrations in areas with large point sources.") (June 22, 2010); *id.* at 35,570 ("it is more appropriate and efficient to principally use modeling to assess compliance for medium to larger sources . . . .").

[37] *Id.* at 35,551, 35,570.

Mississippi is bordered to the west by the Mississippi River and to the south by the Gulf of Mexico. This geography allows for aquatic transportation of ferries, tugs, and oceangoing ships to and from Mississippi. Given Mississippi's gateway for U.S. exports and the amount of estimated NOx emission reductions per piece of equipment, DEQ should consider concentrating its EMT funding on ferries and tugs and OGV shore power systems.

As described above, DEQ estimates a 4.15 ton per vehicle NOx emission reduction for ferries and tugs and 30.0 ton NOx emission reduction per vehicle for OGV shore power. Projects in these areas provide DEQ with another opportunity to accelerate electrification in the state using EMT funds. The costs for replacing diesel ferries, tugs, and OGV shore power will likely be significant, so DEQ should focus its consideration on projects in these areas that also require private funding along with EMT funds.

IV. DEQ Should Provide More Details on the Proposed Project Selection Process

DEQ's Proposed Plan provides a good bare-bones framework for their mitigation plan, but it lacks considerable detail. This general proposal does not give the public sufficient information from which to understand the priorities of DEQ and how it will actually achieve the goals it states for the use of the EMT funds. By keeping the scope of the proposal broad and for only allowing outside parties to propose projects for funding, DEQ misses the opportunity to prioritize the needs of its state and risks failing to achieve its stated goals.

a. The current Proposed Plan does not describe how or if it will allow for public participation in the project selection process.

Based on the information provided in the Proposed Plan, DEQ does not leave room for the public to participate in the project selection process. Since DEQ's Proposed Plan lacks specific detail on which types of projects it will prioritize, it should leave a step in the project selection process for the public to give their feedback on proposed projects and how the EMT funds are allocated. The Proposed Plan is supposed to describe how DEQ intends to use the EMT funds. However, DEQ's Proposed Plan, as is, does not provide sufficient information to understand how DEQ will select proposed projects nor how they will actually achieve the identified goals. Because there are so many gaps in the plan, DEQ should implement a stage within its project selection process that allows for public participation.

b. The Proposed Plan does not ensure achievement of DEQ's goals for the implementation of the EMT.

DEQ's sparsely-detailed project selection process will not guarantee DEQ's goals, nor the goals of the VW Settlement, will be met since the plan allows proposals to replace old heavy-polluting diesel vehicles with new diesel replacements. Instead of targeting the most cost effective reductions in the most polluted areas of the state, DEQ intends to consider all projects that are allowable under the trust. This is an ineffective approach

that will result in wasting a large portion of the trust funds on administrative overhead. DEQ should narrow the projects it will consider funding, based on location and/or type of vehicle or equipment, and limit available replacement options to all-electric vehicles and equipment in order to achieve its goals of achieving significant and sustained reductions in diesel emissions and maximizing the amount of diesel emissions reduced each year per dollar invested.

V. Conclusion

Sierra Club thanks DEQ for the opportunity to submit these comments. We look forward to continued work with the agency and other stakeholders to support forward-looking, transformative, cost-effective uses of the Volkswagen EMT that meaningfully reduce NOx and other polluting emissions from Mississippi's transportation sector.

Respectfully submitted,

Andrea Issod
Senior Attorney
Sierra Club Environmental Law Program
2101 Webster St., Suite 1300
Oakland, CA 94612
(415) 977-5544
andrea.issod@sierraclub.org

Louie Miller
State Director
Sierra Club Mississippi
(601) 624-3503
louie.miller@sierraclub.org

Paige Fennie
Legal Intern
Sierra Club Environmental Law Program
2101 Webster St., Suite 1300
Oakland, CA 94612
paige.fennie@sierraclub.org