

EXHIBIT 4C

Comments Received by Department of Justice

(VW-2LCMT0000288-VW-2LCMT0000448)



August 5, 2016: (UPDATED COMMENTS: Please disregard version dated August 4).

Mr. John Cruden
Assistant Attorney General,
U.S. Department of Justice—Environment & Natural Resources Division
P.O. Box 7611
Washington, D.C. 20044-7611

Submitted Electronically

In RE: Comments on the proposed Mitigation Trust ("MT") announced on June 28th as part of the partial consent decree with Volkswagen (Case No: MDL No. 2672 CRB (JSC).

Dear Assistant Attorney General Cruden:

I am writing on behalf of the Diesel Technology Forum which represents manufacturers of diesel engines, vehicles and equipment. The Forum is a not-for-profit educational organization dedicated to raising awareness of the clean air and economic benefits of clean diesel technology. More information on the Forum, including a list of members, is available at www.dieselforum.org

NOTE: VW was not involved in the drafting of these comments and VW does not support these comments.

These comments are on the above-captured matter of the proposed VW Environmental Mitigation Trust Agreement ("MT"). The partial consent decree incorporates a program to mitigate excess emissions of oxides of nitrogen (NOx) generated by diesel passenger vehicles manufactured by VW. These affected vehicles were recognized as having the capability of by-passing emission control devices.

We remind the Court that there is no evidence to indicate anything inherently defective with clean diesel technologies deployed on passenger vehicles and the enormous variety of diesel powered heavy duty vehicles and off-road equipment. In fact, the greater adoption of clean diesel technologies will generate enormous immediate term NOx emission reductions and will achieve the NOx mitigation goals outlined in the MT.

Summary

The partial proposed consent decree provides for \$2 Billion set aside dedicated funding to vehicle and infrastructure electrification in addition to \$2.7 Billion towards funding mitigation projects to reduce NOx emissions. Our comments herein are with respect to the \$2.7 Billion discretionary Environmental Mitigation Trust oriented to reduce NOx emissions.

We believe the greatest opportunity for mitigation of NOx emissions comes from projects for the replacement or repowering of heavy duty diesel trucks, engines and equipment with new diesel technology. This strategy can achieve the desired environmental goals of the Court in the timeliest manner.

However, as currently configured, the approach outlined in the partial consent decree favors investments in technologies that may have longer lead times with relatively lower NOx emissions reduction potential.

The highest percentage of potential MT funding allocations based on the proposed MT would fund investments in technologies and infrastructure that are previously documented by EPA, CARB and USDOT as being the least cost effective investment in emissions reductions. As a result, it is plausible that the effectiveness of this scheme will delay NOx reductions, and/or achieve those in lower levels than envisioned by the Court.

The MT makes no disclosure of the excess emissions to be reduced, and therefore limits the ability of interested parties to comment specifically about the merits of the proposed mitigation measures, and whether the entire scheme achieves its stated goal. This limits the input of interested parties such as the Diesel Technology Forum to provide a quantitative and analytical input to the proposed mitigation environmental trust.

Recent petitions to EPA from the South Coast Air Quality Management District and other states, claims the need for additional reductions in NOx emissions from heavy duty on highway vehicles to achieve compliance with the national ambient air quality standard for ozone has been thoroughly established. Nonetheless, the MT appears to ignore this fact and discount the funding opportunities for clean diesel related projects that achieve documented NOx reduction.

We respectfully encourage the Court and the parties of the decree to revise the MT such that the allocation scheme place a higher value on timely, guaranteed, and cost effective NOx reduction potential, irrespective of the technology deployed. In this way, the VW settlement can achieve its objectives and do the greatest good for the most people.

I. The MT should be refashioned to be technology neutral. Remedies based substantially on clean diesel technology would deliver more certain reductions in NOx emissions in a timelier manner than other approaches.

According to data compiled recently by the U.S. Department of Transportation, clean diesel technologies are the most cost effective NOx control strategy. An analysis conducted by the U.S. Department of Transportation, using the recent emissions model generated by the U.S.

Environmental Protection Agency, determined that proven clean diesel technology delivers more air quality benefits on a dollar-for-dollar basis.¹

How Much Investment is Needed to Reduce 1 ton of NOx Emissions?

Technology	\$ per Ton of NOx Reduction
Idle Reduction	\$2,040
Diesel Engine Replacement: Heavy-Duty Truck Engines	\$13,748
Diesel Engine Replacement: Transit Bus Engines	\$51,131
Diesel Engine Replacement: School Bus Engines	\$77,315
Extreme Temperature cold start	\$364,817
Car Sharing	\$319,608
Bike Sharing	\$1,217,644
EV Infrastructure	\$1,462,694

The analysis concludes that widely available diesel technology can eliminate a ton of NOx emissions for under \$20,000.

Clean diesel technology can provide immediate term air quality benefits. Clean diesel technology deployed to achieve the near-zero NOx emissions standard established for commercial vehicles manufactured as of 2010, reduce emissions by 98 percent relative to a truck manufactured in 1988. According to 2016 research commissioned by the Diesel Technology Forum, commercial vehicles using clean diesel technology in service from 2010 to 2015 have eliminated 7.5 million tons NOx while saving 69 million barrels of crude oil and 29 million tons of carbon emissions. These benefits will continue to grow as more of the older Class 3-8 fleet transitions to new clean diesel technology.

The regional air quality benefits provided by diesel technology that meets the model year 2010 standard are substantial. Air quality regulators in southern California estimate that NOx emissions in the region could fall immediately by 70 percent, or 86 tons each day, if all commercial vehicles are powered by a diesel engine that meets the near-zero NOx

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http://www.fhwa.dot.gov/environment/air_quality/cmaq/reference/cost_effectiveness_tables/index.cfm#Toc445205109

standard.² The California Air Resources Board estimates that the biggest anticipated reduction in NOx emissions between 2012 and 2035 will be attributable to heavy-duty diesel vehicles as more of the fleet transitions to clean diesel technology that meets the model year 2010 standard.³

Replacing older trucks with new clean diesel technology in the fleet of commercial vehicles will have immediate term air quality benefits for other regions. Nationwide, one-in-four heavy-duty diesel vehicles, almost 2.5 million vehicles, are powered by a clean diesel engine that meets or beats the near-zero NOx emissions standard established for model year 2010. Three out of four trucks are of the older generation with relatively higher levels of NOx emissions. Significant additional NOx reduction can occur in regions across the country if more of the commercial vehicle fleet transitions to near-zero emissions diesel technology.

Additional Air Quality Benefits Under Greater Adoption of Clean Diesel Technology in Commercial Vehicles (eliminated tons NOx/year)			
Share of the fleet with a clean diesel engine (2010 or later model year)	Pennsylvania	New York	New Jersey
100%	105,000	95,000	63,000
75%	68,000	64,000	43,000
50%	31,000	34,000	22,000
Source: Research Commissioned by the Diesel Technology Forum (2016)			

Similar near-zero NOx emissions standards established for commercial vehicles are now required of the large variety of off-road equipment including construction and agricultural equipment. As of 2014, most off-road equipment must meet the "Tier 4" emissions standard established by the U.S. Environmental Protection Agency (EPA). As of 2015, larger applications such as locomotives and marine workboats must meet these standards. Depending on horsepower range, diesel technology to meet these strict standards result in more than a 95 percent reduction in NOx emissions relative to previous generations of technology.

² <http://www.aqmd.gov/docs/default-source/Agendas/aqmp/white-paper-working-groups/preliminary-draft-goods-movement-white-paper---060515.pdf?sfvrsn=2>

³ California Air Resources Board. Emissions Inventory Data, <http://www.arb.ca.gov/ei/emissiondata.htm>

Much like commercial vehicles, the greater adoption of Tier 4 clean diesel technology will generate substantial air quality benefits. The California Air Resources Board estimates that NOx emissions from agricultural equipment will fall by 50 percent and NOx emissions attributable to other off-road equipment will fall by 77 percent between 2012 and 2035, largely by the adoption of Tier 4 diesel technology.⁴

Remedy: The MT should be technology neutral and fails to provide funding for the full population of off-road equipment. According to the California Air Resources Board, the large variety of off-road equipment including construction equipment, represents the 3rd largest source of NOx emissions, yet the MT does not provide funding to improve the emissions from this equipment. Access to MT funding will allow owners of older equipment to replace or repower with new engines to generate substantial air quality benefits.

II. The Mitigation Trust outlined in the partial consent decree issued for public comment is faulty because it fails to consider key factors central to the timely mitigation of NOx emissions; technology availability, desire of target MT recipients to invest in fuel and technology choices, timeframe for its implementation and ability to deliver proven NOx reductions.

The primary interest of the court in the mitigation program as stated in the Purpose and Recitals is to

“... fully mitigate the total lifetime excess NOx emissions from the 2.0 Liter Subject Vehicles where the 2.0 Liter Subject Vehicles were, are or will be operated.”
(APPENDIX D p.1)

Based on the most recent emissions inventories of CARB, NOx emissions from heavy duty trucks are the primary source of concern for the region achieving its ozone attainment requirements, with these vehicles making up 21 percent of all NOx emissions from the transportation sector – the largest source of NOx emissions in the inventory. According to research commissioned by the Diesel Technology Forum, 82 percent of heavy-duty vehicles in operation in California are powered by an engine that does not meet the latest near-zero NOx emissions requirement established for trucks manufactured beginning in 2010.

Yet the MT fails to focus the mitigation strategies on technologies that have the potential to achieve the greatest emissions reductions, or at the very least, follow a technology neutral scheme that would allow equal access to MT funding whatever the strategy that a specific applicant may choose to submit for an eligible mitigation measure. If Trustees approve allocations of dollars as currently envisioned, the MT will likely end up paying far more dollars for far fewer reductions of NOx emissions.

⁴ California Air Resources Board. Emissions Inventory Data, <http://www.arb.ca.gov/ei/emissiondata.htm>

For example, all electric technologies in heavy duty Class 8 vehicles identified in the MT (APPENDIX D-2 1(d)(4)) are either not fully commercially available or are available in limited quantities for niche applications. Yet the MT provides funding for 75 percent of the cost of a new all electric commercial vehicle but only 25 percent of the cost of a new diesel vehicle. These all-electric commercial heavy-duty vehicles by their nature would have less operational capacity and range as a comparable diesel truck. As a result, it is reasonable to conclude that such a vehicle will provide an overall smaller potential reduction in NOx when compared to air quality benefits that could be achieved from replacing an eligible heavy duty truck with new clean diesel technology.

The MT also fails to consider the marketplace and consumer acceptance of the MT-favored technologies and the likelihood of implementation success. Many of the fuels and technologies promoted here for the highest levels of funding allocation are technologies that are not mature enough for commercialization or do not provide a sufficient return on investment for fleets to justify the greater risk and increased cost.

To date, all-electric Class 8 tractors are not commercially available except in very small niche short-haul or last-mile applications where there is adequate electric charging infrastructure to allow for frequent recharging. The majority of new Class 8 tractors perform regional and long haul delivery operations on average of 120,000 miles each year in regions with no access to charging infrastructure. Additional time and resources are needed to continue research, development and rigorous testing of these all-electric technologies for heavy-duty vehicles. Many years will pass before these technologies are commercially available, if they are ever delivered to the market.

In contrast, clean diesel technology is widely available in all markets for all customers, does not require additional infrastructure developments or other special requirements and is proven in its ability to reduce NOx emissions that are generating substantial air quality improvements today.

Remedy: We respectfully urge the parties and the Court to reconsider the allocation scheme proposed here to provide equal funding for all technologies and fuels that reduce NOx emissions with any preferences based on cost effectiveness of NOx reductions in line with the quickest realization of the program's stated purpose. Funding provided through the Environmental Mitigation Trust for the greater adoption of clean diesel technology will provide more certain and immediate NOx reductions and other air quality improvements.

III. By giving funding preference in the MT to Government Fleets instead of Private Fleets, the MT is dramatically limiting NOx emissions reductions opportunities.

The MT as configured provides government fleets with funding allocations up to 100 percent for their eligible vehicles. Government fleets by their very nature, travel far fewer miles than does a comparable vehicle in a private fleet. Therefore, the potential for NOx emissions reductions in a particular region will likely be reduced for a dollar invested in a government

fleet vehicle compared to the same dollar invested in a private fleet vehicle. The environment is agnostic on the source of the emissions reduction.

Remedy: The MT should remove preference for government fleet vehicles in favor of more rapidly achieving NOx mitigation for all fleet vehicles (government and private) in a region.

IV. The Diesel Emissions Reduction Act program (DERA) is a proven, effective and ready-made vehicle for facilitating environmental mitigation.

The DERA program is a bipartisan, well documented, proven and credible program for reducing NOx and particulate emissions from diesel engines, particularly in driving clean air benefits across heavy-duty applications. The program has provided funding according to a technology neutral approach. Clean diesel technologies have provided most of the air quality benefits thanks to clean diesel's favorable cost-benefit.

According to the April 2016 3rd report from EPA to Congress, enormous success has been delivered, thanks to the highly quantified and validated DERA program and the review and award process.⁵ For example, the program has not precluded or promoted one retrofit or replacement technology over another in reducing NOx emissions by 335,200 tons between 2008 and 2013. In fact, clean diesel technology has driven the overwhelming majority of these clean air benefits provided through the DERA program.

The DERA program serves as an example of the effectiveness of clean diesel to provide immediate air quality benefits to communities around the country. The American Lung Association, in its State of the Air Report for 2016, cites the retirement older diesel vehicles and equipment as a leading factor to improving air quality. Easy access to clean diesel fuel and growing availability of biodiesel and renewable diesel fuel do not necessitate additional investments in fuel infrastructure. Clean diesel engines and advanced diesel emission control technologies that meet the most stringent emissions standards have been proven in the marketplace for almost half-a-decade.

Diesel engines are the prime mover in 15 sectors of the economy, not just smaller or niche applications in developing markets or only in major population centers. Incremental investments to upgrade diesel vehicles with replacement cleaner diesel engines will ensure greater success and ensure NOx mitigation that exceeds the court targets.

Remedy: The DERA program offers greater and proven opportunities for NOx reduction and for the administration of NOx mitigation program.

V. Conclusion

⁵ U.S. EPA. 3rd Report to Congress: Highlights of the Diesel Emissions Reduction Program (2016). <http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1000HMK.pdf>

As presently configured, the MT funding scheme appears to favor promotion of alternative fuels and technologies at scales and timeframes that will unlikely deliver equivalent or greater NOx emissions reductions than an approach focused on replacing older diesel engines with new ones. We encourage a revised approach that establishes achieving mitigation of NOx emissions in the fastest possible timeframe as the overarching mandate for the MT.

At a minimum, a technology neutral approach is warranted. Allowing for the equal treatment (allocations and vehicle eligibility) of clean diesel technologies among all others to reduce the excess NOx emissions will deliver anticipated air quality benefits in a timelier manner than will other schemes.

EPA, in reports to Congress (DERA) in rulemaking activities and other venues acknowledges the enormous NOx and particulate matter benefits that have been achieved by the introduction of clean diesel technology across the wide variety of on- and off-road applications. These benefits are provided without additional investments in fueling and other infrastructure and have been demonstrated in the market place to effectively achieve emissions reductions while also meeting customer demands. Yet in the MT, EPA and other parties to the settlement have discounted these advantages in favor of alternative approaches.

In conclusion,

- The MT should be revised to a technology-neutral funding allocation scheme where all technology including clean diesel is fairly considered for levels of funding allocations more commensurate with its NOx reduction potential;
- The MT should fully disclose the NOx reductions targets for each state to allow for a full analysis by all interested parties;
- Given that a separate set-aside of \$2 Billion exists for electric vehicle related investments, the \$2.7Billion MT should give first priority to other NOx reduction technologies.
- The MT should expand the scope of technology eligibility by including a wider category of off-road equipment, and
- The Diesel Emissions Reduction Act program (DERA) should serve as a guiding example of a technology neutral program credited for providing immediate, measurable and cost effective emission reductions.

The MT in its current form has placed other priorities over proven NOx mitigation strategies, deferring cleaner air in favor of promoting alternatives. We encourage that the MT be modified as noted herein to fully realize the potential for substantial and proven clean air benefits from incorporating clean diesel technology.

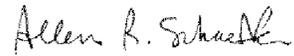
Please contact me at (301) 668-7230 with any questions or concerns.

Comments of the Diesel Technology Forum to US DOJ. Case No: MDL No. 2672 CRB (JSC)

August 4, 2016

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Very truly yours,



Allen R. Schaeffer
Executive Director

CC: The Honorable Gina McCarthy, US EPA
Ms. Janet McCabe, US EPA
Mr. Chris Grundler, US EPA
Ms. Mary Nichols, California Air Resources Board
Dr. Alberto Ayala, California Air Resources Board
Ms. Kamala Harris, Attorney General, State of California



August 5, 2016

TO: Assistant Attorney General, Environment and Natural Resources Division

RE: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386

Drive Electric Florida (DEF), in its diverse membership of academic, environmental, government and industry stakeholders, is committed to advancing the energy, economic, and environmental security of the state of Florida by promoting the growth of electric vehicle ownership and accompanying infrastructure. DEF appreciates the opportunity to comment on these proceedings.

Principally, DEF strongly encourages the Florida Governor's office to apply for Environmental Mitigation Trust funds to enable the people of Florida to benefit from the approximately \$152 million in initial funding designated to assist in reducing NOx emissions in our State.

Additionally, DEF offers comments on two aspects of the Environmental Mitigation Trust:

1. The Trust stipulates that the beneficiary may use *up to 15%* of funds to purchase, install, operate and maintain Light Duty Zero Emission Vehicle Supply Equipment (including electric vehicle charging).
 - a. DEF encourages the Florida Governor's Office to direct that the *full 15%* of these funds be used as stated in the decree.
 - b. DEF also avails itself to the Governor and his Staff to comment on how the funds may be used to best promote zero emission transportation.
2. The Trust stipulates that the beneficiary may use funds to repower or replace school buses, shuttle buses, or transit buses.
 - a. DEF encourages the Florida Governor's office to fully realize the benefits of zero emission all-electric buses, which offer the greatest NOx reduction of all available bus technologies.
 - b. DEF also comments that zero-emission all-electric buses have the greatest potential to reduce NOx emissions in disadvantaged communities and among Floridians who do not own cars.

The members of Drive Electric Florida respectfully submit these comments for the benefit of the people of Florida. www.driveelectricflorida.org



Drive Electric Minnesota
c/o Great Plains Institute
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August 4, 2016

Assistant Attorney General
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Dear Assistant Attorney General,

The undersigned groups are partners in Drive Electric Minnesota (Drive Electric MN). We are writing to express our comments and recommendations on the Partial Consent Decree of the Volkswagen Clean Air Act Partial Settlement.

Our overarching comment is that investments under Appendix C (National ZEV Investment Plan) should NOT focus only on ZEV states, but should instead be truly national and give equal attention to states like Minnesota and other Midwestern states that have been traditionally left behind by both federal charging infrastructure investments and marketing and incentives from many (but not all) automakers.

Drive Electric MN is a partnership of Minnesota's electric vehicle (EV) champions and is dedicated to encouraging the adoption of EVs and the establishment of EV charging infrastructure. Our mission is carried out through public-private partnerships, financial incentives, education, technical support, and public policy. Our partnership is facilitated by the Great Plains Institute, and partners include automakers, auto dealers, state and local governments, electric utilities and cooperatives, EV charging companies, NGOs, EV owners, and others.

Although Minnesota has generally been passed over for major federal investments in EV charging infrastructure, and does not have state incentives or mandates like other states, we nevertheless have made good progress in installing charging infrastructure and encouraging EV adoption. Currently, Minnesota has 232 charging stations with 513 outlets, and 30 DC superchargers. Most of our public charging stations leveraged private funding. These numbers exclude private charging stations. Further, a number of Minnesota electric utilities and cooperatives have rebates, EV rates, and other programs available for customers and Minnesota now has over 3,500 EVs on the road including plug-in hybrids and battery electric vehicles. We are continuing to build, as a coalition, an active collaborative program for EVs in the state to ensure further EV deployment. We are pioneering a new approach to EV promotion that can work in states that are not part of the Zero Emission Vehicle (ZEV program) – an

approach that relies on effective partnerships, coordinated planning and strategy development, and robust education, marketing and outreach.

Some highlights of our ongoing work in Minnesota include the following:

- The existence of Drive Electric MN since 2008 as a brand-neutral marketing, education, and advocacy platform that engages all parts of the EV sector in the state;
- A history of promoting EVs through ride-and-drive events that promote EV adoption by individuals as well as public and private fleets;
- Efforts underway to promote EV charging in multi-family dwellings and workplace settings;
- Multi-pronged EV education and outreach efforts by electric utilities and cooperatives, including the ReVolt program by Great River Energy and the Drive With Gusto program by Xcel Energy that upgrade EV drivers to 100% wind power when they utilize an off-peak charging rate;
- A demonstrated interest by public transit agencies in the Twin Cities metro area and Duluth in acquiring EV buses;
- A bus company – New Flyer – that plans to increase manufacturing of EV buses in St Cloud, MN and Crookston, MN – leading to local economic impact while decreasing air pollution in urban areas;
- A growing sector of start-up companies in the EV charging space including companies like ZEF Energy and Power Over Time; and,
- Major EV events such as the 2015 National Drive Electric Week event at Mall of America, and the Electric Room at the 2016 Twin Cities Auto Show.

We have analyzed the lifecycle greenhouse gas emissions from EVs in the state, and found that EVs offer deep reductions relative to gasoline or diesel vehicles. Because of the high and increasing use of low GHG technologies such as wind and nuclear in our generation mix, an EV charged in MN offers 40-60% GHG reductions relative to a conventional vehicle. Furthermore, most EV drivers in the state sign up for program to use 100% renewables, which translates to a 95% GHG reduction. Similar reductions in criteria pollutants will also result from greater EV adoption. More vehicle electrification is particularly important given that the Twin Cities metro area is close to non-attainment for PM 2.5.

Minnesota has a robust partnership that is committed to improving the availability of EV charging. Any efforts as part of Appendix C and Appendix D will be met with enthusiastic cooperation by Drive Electric MN and our partners. We invite Volkswagen and the US EPA to devote resources to states like MN that have brand neutral marketing and promotion partnerships in place so that new resources can be used quickly and effectively to reduce pollution and increase EV adoption. Some commenters are urging Volkswagen and the US EPA to devote funding under part C only to efforts in ZEV states. This would be misguided, and would miss an opportunity to achieve real benefits across the country.

We would like to offer specific comments related to Appendices C and D of the partial consent decree.

Appendix C

We have three overarching comments related to the development of the National ZEV Plan.

First and foremost, this should truly be a national plan. Minnesota and the Midwest in general has had limited investment from federal programs like the American Recovery and Reinvestment Act of 2009. Many automakers are reluctant to offer their EV models for sale in MN, focusing both vehicle availability and sales incentives on California and other ZEV states. The Consent Decree encourages efforts to “increase access in underserved areas”. One interpretation of this language is socio-economic, and efforts to serve lower income and minority communities are certainly needed. But another interpretation is regional, and many US states are also underserved areas, having been passed over for federal investments in charging infrastructure, marketing efforts by automakers, and vehicle availability. The National ZEV Investment Plan should remedy this disparity. Minnesota has demonstrated that we can overcome limited vehicle availability and limited federal investment to achieve a respectable and growing public charging network and a motivated and growing group of EV owners. We would like to be met half way with increased efforts by Volkswagen as part of the National ZEV Investment Plan.

Second, we urge Volkswagen and the US EPA to partner with organizations operating on the ground in the states. This could be state government entities, or multi-stakeholder partnerships like Drive Electric MN. Effective coordination and collaboration will result in greater impact because the investment by Volkswagen will be able to leverage local efforts and benefit from local knowledge and relationships. Rather than being duplicative of existing efforts, it would be more effective to invest in scaling up efforts under way. Drive Electric MN’s efforts, for example, fit many of the criteria laid out for the National ZEV Plan – we emphasize brand-neutral activities such as ride-and-drive events, social media promotion, and direct outreach to large companies and state and local governments. When deciding where to invest resources across the country, we urge you to invest resources in the places that are ready to receive them and use them effectively. Resource allocations should not be simply based on whether a state has a policy in place, such as a ZEV mandate or state subsidy, but whether the state has existing partnerships and programs to invest in. Minnesota fits that profile perfectly.

Finally, the Consent Decree calls for third party review of the National ZEV Investment Plan, with a three person review panel. We would urge that at least one of these reviewers is from a state that is not part of the ZEV mandate program.

Appendix D

Funding in Appendix D is allocated by a formula, and it appears that Minnesota is forecast to receive funding. We look forward to collaborating with Volkswagen and the US EPA to provide input on the best uses for this funding in order to achieve air quality benefits and pollution reduction.

We would like to note that there are numerous opportunities in Minnesota specific to electric vehicles. We believe there are opportunities in the state in each category listed in the appendix. We would like to highlight, in particular, the opportunity for EV transit buses. Public transportation agencies in the Twin Cities (Metro Transit) and Duluth (Duluth Transit Authority) have done pilot testing with EV buses, and are developing plans to move toward demonstration of buses. Funding provided under this program could be very helpful in overcoming the higher upfront cost of EV buses. Since one of the manufacturers of EV buses, New Flyer, produces EV buses in Minnesota, this is an opportunity for economic development in our state in addition to improving air quality and decreasing air pollution. Minnesota also has a long history of investing

in pollution reduction in school buses, and could be well-suited to demonstrate the deployment of EV technology in that setting. There are undoubtedly numerous other opportunities consistent with guidelines provided in appendix D.

We would like to raise a question about years of eligibility. Given the high mileage usage and high turnover of fleet vehicles, it makes sense to allow more recently purchased vehicles to be eligible for replacement. Although newer vehicles may have better pollution control equipment, even switching from a new diesel vehicle to an electric vehicle will offer deep GHG and criteria pollutant benefits.

Although it is beyond the scope of the Partial Consent Decree which focuses on brand neutral ZEV promotion, we would urge Volkswagen to make a stronger effort to market its own EV products in Minnesota. There are very few Volkswagen EVs on the road in MN, compared to relatively robust sales from Nissan, General Motors, Tesla, Ford, and others. We encourage Volkswagen to make marketing incentives available to dealerships in our state. It is also critical to EV sales that dealerships be properly trained and that an inventory of vehicles be available so potential customers can see them on the lots.

In closing, Drive Electric MN and our partners are offering ourselves as an enthusiastic partner for collaboration with EPA and Volkswagen. We encourage ongoing dialogue and discussion in designing a program that builds on existing efforts at the state level. We believe that collaboration with state groups that are already promoting EVs will create a strong basis for a National ZEV Investment Program.

Thank you for your time and consideration.

Sincerely,

Drive Electric Minnesota and our Partners, including:

- Center for Energy and the Environment
- Fresh Energy
- Great Plains Institute
- Great River Energy
- Innovative Power Systems
- Minnesota Plug In Vehicle Owners Circle
- Minnesota Power
- PlugIn Connect
- Xcel Energy
- ZEF Energy



August 4, 2016

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In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5- 2-1- 11386.

Dear Mr. Cruden:

Duke Energy offers the following recommendation in response to the proposed Partial Consent Decree to the above-referenced lawsuit. Duke Energy is one of the largest electric power holding companies in the United States. Its regulated utility operations serve approximately 7.4 million electric customers located in six states in the Southeast and Midwest, representing a population of approximately 24 million people.

Duke Energy recommends that the final Partial Consent Decree provide maximum flexibility for beneficiaries to consider allocating some of their funds to truck stop electrification (TSE). Specifically, we recommend that TSE be listed as an eligible mitigation activity within Appendix D-2, along with the nine other activities that include various forms of diesel retrofits and the marine equivalent of TSE. While TSE is eligible for funding under the DERA option, we are concerned that some beneficiaries might decline or minimize use of the DERA option. Moreover, should Congress decide not to provide funding for the DERA program, there would be no opportunity to invest in TSE under the proposed Partial Consent Decree.

Truck drivers often idle their engines during overnight truck stop stays in order to maintain a safe and comfortable interior environment. The Argonne National Laboratory estimates that rest-period idling wastes about 1 billion gallons of diesel fuel per year, and results in the emission of about 55,000 tons of nitrogen oxides annually.¹ Truck Stop Electrification, a U.S. Environmental Protection Agency (EPA) SmartWay verified technology, provides long-haul truck drivers an alternative to idling their diesel engines during their overnight stays. The EPA has rated Advanced TSE as the most cost effective activity (defined as the cost per ton or emissions reduced) among the voluntary

¹ U.S. Department of Energy, Energy Efficiency & Renewable Energy, *Long-Haul Truck Idling Burns Up Profits*, August, 2015, Pub. DOE/CHO-AC02-06CH11357-1503.

John C. Cruden Esq.
August 4, 2016
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mobile source emission reduction programs supported by EPA's Office of Transportation and Air Quality; more cost effective than diesel retrofits.²

In summary, Duke Energy recommends that the final Partial Consent Decree provide maximum flexibility for beneficiaries to consider allocating some of their funds to TSE by specifically listing TSE as an eligible mitigation activity within Appendix D-2.

Sincerely,

A handwritten signature in black ink that reads "Michael Stroben". The signature is written in a cursive, flowing style.

Michael Stroben
Analysis and Strategy Director
Environmental and Energy Policy and Strategy
Duke Energy Corporation

² United States Environmental Protection Agency, *The Cost-Effectiveness of Heavy-Duty Diesel Retrofits and Other Mobile Source Emission Reduction Projects and Programs*, May, 2007, Pub. EPA420-B-07-0006.



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July 27, 2016

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Via U.S. mail and email to John.Cruden@usdoj.com

Re: Request for Extension for Public Comment in *In Re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation*, MDL No. 2672 CRB (N.D. California).

Dear Mr. Cruden:

Our coalition of attorneys represents the Eastern Band of Cherokee Indians in their claims against Volkswagen. On June 28, 2016, the United States lodged with the United States District Court for the Northern District of California, a Partial Consent Decree ("the Decree") in the above-referenced matter. The Decree provides, *inter alia*, for a distribution of 1.84% of certain settlement proceeds (the Mitigation Trust) to qualifying Indian Tribes. See, Consent Decree, Appdx D-1. In order to qualify, a tribe must identify projects which fit within one of nine specific "Eligible Mitigation Actions and Mitigation Action Expenditures," or actions under the Diesel Emission Reduction Act – for which the tribes may use settlement monies as a "non-federal match." *Id.*, Appdx D-2.

Notice of the 225-page Decree was published in the Federal Register on July 6, 2016 with a public comment period set to close on August 5, 2016. Because that time frame is inadequate to address the issues presented by the Decree and the programs implemented by it, the Eastern Band of Cherokee Indians strongly believes that an extension of the public comment period is warranted. Initially, the allocation of proceeds is complex, and cannot be sufficiently reviewed within the allocated time. Moreover, the comment period is simply not sufficient to allow meaningful analyses of the "eligible" programs which have been set forth in the

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Decree, review of all current Tribal programs, or development of any possible alternatives that should be considered by the United States.

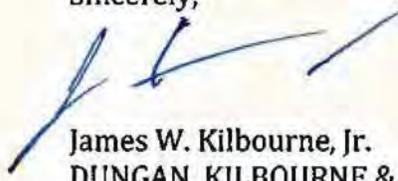
In particular, the Eastern Band of Cherokee Indians will need to consider the allocation set forth in the Decree, the bases therefore, and the implications of that process. The Decree identifies 55 different governments and funds to which an allocation could be made, and assigns over 40 different percentages to those. Given the lack of specific data justifying these calculations, it is important to explore the methodology behind those numbers, and the implications of that allocation if it is ultimately implemented. The Eastern Band of Cherokee Indians – and every other federally recognized tribe – must also scrutinize their existing programs and policies, identify qualifying equipment and programs, and determine whether the process set forth in the Decree will adequately address their needs. The Eastern Band of Cherokee Indians includes multiple and layered commissions and departments, employs thousands of individuals, and has over 16,000 citizens. The Tribe and related businesses are deeply connected to tourism and serve as a major employer and economic engine for Western North Carolina. Undertaking a review of the Tribe's qualifying equipment and programs– in any meaningful manner – is not possible within the current time provided.

The “one size fits all” mitigation language doesn't match the unique conditions on the ground within the Eastern Band of Cherokee Indians, specifically, or Indian Country, generally. The economic reality for tribes varies significantly from the conditions in the States and in Puerto Rico. There are little (or no) airport ground maintenance equipment, trains, ferries, or tugboats in Indian country. The benefit of the mitigation projects is very narrow for the Tribes and the contribution to the reduction of No_x would be greatly enhanced by additional flexibility. Among other things, we will use the extension to identify possible additions to the language to reflect the currently reality facing Indian Tribes and provide for the most efficient mitigation for the lowest cost.

Additionally, tribes that cannot quickly identify qualifying equipment and programs run the risk of receiving no mitigation funding at all regardless of the impacts the VW diesel vehicles may have had on the tribe's communities – a risk that states do not share under the current formula. This is especially true because, as set forth in the Decree, the enumerated programs are the exclusive means through which tribes can realize any direct mitigation from this proposed settlement.

The Decree is complex and it will require more time for tribes to fully analyze the issues and draft thoughtful and responsive comments. Our client, the Eastern Band of Cherokee Indians, urges the United States to extend the comment period by an additional 60 days.

Sincerely,



James W. Kilbourne, Jr.
DUNGAN, KILBOURNE & STAHL, P.A.

For the firm and

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cc: Eastern Band of Cherokee Indians
Phil Brooks (by email to Brooks.Phillip@epa.gov)

The Eastern Band of Cherokee Indians



Principal Chief Patrick H. Lambert
Vice-Chief Richard G. Sneed

August 5, 2016

Bill Taylor
Chairman
Wolfatown Township

Brandon Jones
Vice-Chairman
Snowbird &
Cherokee Co. Township

VIA U.S. MAIL AND ELECTRONIC MAIL

John C. Cruden
Assistant Attorney General
Environmental and Natural Resources Division
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Tribal Council Members

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Albert Rose
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Tommye Saunooke
Painttown Township

Marie Junaluska
Painttown Township

Adam Wachacha
Snowbird &
Cherokee Co. Township

Bo Crowe
Wolfatown Township

Anita Lossiah
Yellowhill Township

Alan B. Ensley
Yellowhill Township

Re: In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and
Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and
D.J. Ref. No. 90-5-2-1-11386

Dear Mr. Cruden:

These comments are being submitted on the proposed Consent Decree in the above-referenced litigation, on behalf of the Eastern Band of Cherokee Indians (herein, the "Tribe"). The Tribe has been acknowledged for centuries by the United States Government as a federally recognized Indian Tribe. The Tribe has been long recognized as a leader in innovation and development. The Eastern Band of Cherokee Indians is a major economic engine for all of Western North Carolina, employing thousands and hosting millions of tourists. The Cherokees were the first tribe to develop a written tribal language, adopted a written Constitution, publish a tribal newspaper, and successfully defend their inherent sovereignty before the United States Supreme Court. Today, the Tribe serves as a leader in protecting the environment of our fragile lands. We appreciate your recognition that Indian Tribes play an important role in protecting the environment, and thank you in advance for your consideration of these comments.

I. History of Negotiations and Summary of Comments to Improve the Consent Decree

On June 26, 2013, the President set forth "a national policy to ensure that the Federal Government engages in a true and lasting government-to-government

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relationship with federally recognized tribes in a more coordinated and effective manner, including by better carrying out its trust responsibilities.” Exec. Order 13647 (June 26, 2013). The Tribe, however, was neither consulted nor invited to participate in the settlement negotiations, even those concerning the type of environmental projects that would be eligible for mitigation proposals. The Tribe only saw the Consent Decree after it was completed and accordingly did not have a chance to provide input concerning the mitigation projects that would be viable and desirable on Indian lands. This falls far short of exercising the United States’ responsibility to federally recognized tribes in the “coordinated and effective manner” established by the President. And, consultation or – at a minimum – notification on a government-to-government basis would not affect the ability of the Attorney General to settle cases on behalf of the United States. *See, id.*, Section 4(a)(i).

Most Indian Tribes do not have the same needs, resources or infrastructures as the states. There are few large-scale opportunities for conversion or replacement of diesel engines; there is not as much “in-house” expertise in terms of planning, engineering and executing projects; and there are few, if any, railroads, ferries and other infrastructure with large diesel equipment. As discussed in more detail below and in the attached report by Dr. Frank Ackerman of Synapse Energy Economics, Inc., a well-respected expert on energy economics and related environmental issues, we seek modifications of the Consent Decree that recognize these different circumstances, including changes which provide for the following:

1. Funding to expand air quality monitoring on Tribal Lands.
2. Allowing for a broader range of mitigation projects with fewer restrictions, including renewable energy projects such as solar, wind and hydroelectric power; efficiency projects that reduce pollution and fossil fuel use, such as replacement of older fuel sources like wood, kerosene, and fuel oil; and less restrictions on the conversion or replacement of diesel engines with alternatives such as electric, hydrogen, or compressed natural gas (including lifting restrictions on building the facilities necessary for such projects). This proposal could be more suitable on tribal lands and in many circumstances would displace larger sources of nitrogen oxides (NO_x) and result in more significant reductions of NO_x emissions and other equally harmful pollutants.
3. Reducing the number of annual funding cycles to one, thereby allowing for larger, more efficient and sustainable long-term projects.
4. Providing for the appointment of a separate Trustee for eligible Indian tribe projects, eliminate the reverter of Indian mitigation funds to the general fund, and replace Settlement Appendix D, 5.0.5.2.3 (which provides for a per capita distribution).

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5. Allowing for an appropriate percentage of the mitigation funds to be used for technical assistance and administrative expenditures.
6. Clarify the waiver provision and ensure that Indian Tribes are given a comparable percentage of any penalty payments or fines.

II. Recognition of Tribal Interests and Coordination with Tribal Governments has been Inadequate

As a preliminary matter, we seek more meaningful coordination, including recognition of and compliance with the Federal Government's stated commitments. Executive Order 13175 specifies that each Agency must have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications. Exec. Order No. 13175 (Nov. 6, 2000). In 2011, EPA developed a policy to comply with that Executive Order. Its statement could not be more clear:

EPA's policy is to consult on a government-to-government basis with federally recognized tribal governments when EPA actions and decisions may affect tribal interests. Consultation is a process of meaningful communications and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes.

EPA Policy on Consultation and Coordination with Indian Tribes (May 4, 2011), Section I.¹ Moreover, "Consultation should occur early enough to allow tribes the opportunity to provide meaningful input that can be considered prior to EPA deciding whether, how, or when to act on the matter under consideration." *Id.* at Section V.C.²

In light of this policy, the Tribe submitted a letter seeking an extension of the public comment period on July 27, 2016. The letter noted that the time frame was inadequate to allow meaningful analyses of the issues presented by the Decree and the programs implemented by it. On July 29, 2016, the DOJ determined not to extend the public comment period and stated that, "We will treat your letter as a public comment." The DOJ's initial response did not comport with Executive Order 13175 or the EPA's Policy, and does not reflect the meaningful consideration appropriate for a government-to-government request affecting important tribal interests.³

¹ The 2011 Policy reaffirms the principles set forth in the 1984 "EPA Policy for the Administration of Environmental Programs on Indian Reservations," which "remains the cornerstone for EPA's Indian Program and 'assure[s] that tribal concerns and interests are considered whenever EPA's actions and/or decisions may affect' tribes (1984 Policy, p. 3, principle no. 5)." 2011 Policy at Section II.

The U.S. Department of Justice has similar policy, discussing the "government-to-government relationship" between "the Federal Government and the governments of federally recognized Tribes." DOJ Policy Statement 0300.01 (August 29, 2013).

On August 3, 2016, two days before the end of the comment period, DOJ provided some rationale for its refusal in response to an inquiry by counsel for the Nation. None of the issues set forth in these comments

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Likewise, while we appreciate the DOJ Office of Tribal Justice's July 7, 2016 invitation to consult on the process for distributing the Tribal Allocation Subaccount, consulting with the Tribe beginning on August 8, 2016 - after comments on the Consent Decree are due - makes the consultation potentially meaningless and fails to strengthen the Nation's management over resources and impacts on its land. We are also concerned about the limited scope of the input sought from the Nation. The only issues on which the Tribe is invited to consult are:

- A method for allocating annual funding in the Tribal Allocation Subaccount for Eligible Mitigation Actions;
- A method for providing technical assistance to the tribes; and
- A method for recommending candidates to serve as the Trustee.⁴

The Tribe is not being consulted regarding the very programs for which it will be required to qualify. Moreover, the Tribe is not being consulted regarding significant issues relating to the distribution of the funds, including whether the Eligible Mitigation Actions and payment schedule as designed will accomplish the overall goals of the Consent Decree in Indian Country.

We are hoping for a more collaborative approach to this process moving forward.

III. Recommended Modifications to the Consent Decree

1. Expand the List of Qualified Mitigation Projects and Remove Limitations

The Consent Decree sets forth a very narrow list of qualified mitigation projects, primarily dealing with efforts to modify and/or replace existing diesel-powered equipment.⁵ While Indian Tribes have diverse needs, few of them have the established infrastructure or transportation systems to take advantage of these specific projects in a way that will truly advance the Consent Decree's goal to "[F]ully mitigate the total, lifetime excess NO_x emissions from the 2.0 Liter Subject Vehicles[.]" Decree, Appx. D. We agree with the stated goal, but believe it would be more appropriately achieved using a flexible approach, rather than a one-size-fits-all solution.

were discussed, nor was any justification provided for ignoring the core principals of the Executive Orders regarding tribal relations or EPA's Tribal Policy.

We note that the DOJ has not yet provided the "framing paper" setting forth the issues to be discussed at the first "telephonic consultation" on August 8, 2016.

These include: Freight Trucks, Buses, Locomotives, Ferries/Tugs, Ocean Going Vessels Shorepower, Airport Ground Support Equipment, Forklifts, and Zero Emission Vehicle Supply Equipment. See Decree, Appx. D-2.

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We have identified examples of potential mitigation projects that would better fit the needs of Indian Tribes and the conditions on the ground, while reducing the amount of NO_x emissions to which tribal citizens are exposed. These include:

- Development of solar, wind and hydroelectric power.
- Installing energy efficient upgrades to tribal housing and buildings.
- Expanding infrastructure to deliver natural gas to tribal lands for use as an alternative fuel in tribal vehicles.
- Conversion of older fuel sources like wood, kerosene, and fuel oil.
- Establishing monitoring stations to track NO_x on tribal lands

Because monitoring of the NO_x is rare in Indian Country, there is little baseline data to evaluate projects or recommend areas that require more extensive mitigation. Specifically, the Tribe is concerned that there is little scientific data regarding the concentration and the movement of NO_x across the mountain valleys and ridges which make up the Tribal Lands in the Great Smoky Mountains.

Further, we believe that the geographic restriction to spending all funds on tribal lands will foreclose otherwise desirable projects. For example, there is no Natural Gas currently located on the lands of the Eastern Band of Cherokee Indians. To build the infrastructure to support natural gas conversion and bring natural gas to the Tribal lands it would be necessary to expend funds outside of Indian Country. This would be an even larger issue for tribes with “checker-boarded” reservations.

We believe all parties would be better served with language giving Indian Tribes the ability to submit proposals for a broader range of mitigation projects consistent with the goals of the partial consent decree.

We also request giving a designated Tribal Trustee the authority to approve alternative environmental mitigation projects that meet the Consent Decree’s stated goal while effectively considering the diverse needs and means within Indian Country.

2. Reduce the Number of Rounds and the Length of the Mitigation Payment Period

In order to ensure that Indian Tribes are able to implement more impactful mitigation projects, we recommend reducing the number of annual funding cycles to one rather than six as anticipated by the Consent Decree. *See* Decree, Appx D, Section 5.0.5.2.1. There are 567 Federally recognized Indian Tribes,⁶ and each may have projects to propose. Dividing the approximately \$50 million available between all the interested tribes and further dividing them into six rounds or funding cycles might

⁶ <http://www.bia.gov/WhoWeAre/index.htm>

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yield *de minimis* awards and prevent more worthwhile and environmentally beneficial projects. We are concerned that spreading the payments over six annual funding cycles will result in smaller, short-term projects rather than a meaningful, long-term investment in NO_x mitigation.

3. Appoint a Tribal Trustee, Eliminate the Reverter of Indian Mitigation Funds, and Provide the Tribal Trustee with Authority to Distribute Funds in Case Eligible Requests by Tribes Exceed Available Funding

Tribal interests and viable mitigation projects differ significantly from those of the states and cannot be knowledgeably addressed by the proposed Trustee. Therefore, we request the appointment of a designated Tribal Trustee to effectively consider the diverse needs within Indian Country.

Of particular concern is that the Tribe is already being asked to waive their right to seek injunctive relief or to bar certain vehicles from tribal lands in exchange for a promise that their mitigation proposals will be considered. However, the Tribe and other tribes stand to lose some or all of the money allocated for their benefit in the event their funding requests are rejected or diluted. *See* Decree, Appx. D, Section 5.0.5.2.1. In fact, there is no guarantee that the Trustee will approve any Tribal proposals or fund any Tribal mitigation projects. And if tribal projects are approved, there is no guarantee they will be funded at an adequate level.

Rather than including a provision that would return any uncommitted funds to the non-tribal Beneficiaries, we ask the EPA to commit to working with Indian Tribes pursuant to EPA Tribal Policy to assure a fair and complete distribution of the mitigation funds currently allocated for tribal projects.

We are also very concerned with Settlement Appendix D, Section 5.0.5.2.3, which provides that funds are to be allocated on a per capita basis if the funds applied for are greater than the funds available. Among other things, this provision could result in a tribe that expended significant resources on submitting a detailed technical application receiving the same amount of funds on a per capita basis as another tribe that expended no resources on submitting a one-line application of intent to receive funds. Further, a per capita allocation of funds will not match the harm caused by Volkswagen. We believe that Tribes such as the Eastern Band of Cherokee Indians which receive millions of non-Indian visitors every year face a far greater impact from the “lifetime excess NO_x emissions from the 2.0 Liter Subject Vehicles.” Instead, we request that the Tribal Trustee be given the authority on allocating funds in the case where applied for funds exceed available funds.

4. Request to Expand the Administrative Expense Allocation

Tribes have significantly less “in house” expertise and administrative capabilities relative to the states and will need to rely to a greater extent on paid professionals in developing and implementing projects, including engineering, technical,

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administrative, accounting and legal assistance. Accordingly, we request greater flexibility to use the allocated trust funds for technical, professional and administrative assistance. Currently, the Consent Decree provides for two additional expenditures from the Tribal Allocation Subaccount, totaling 15%:

- 5% to be directed towards technical assistance to enable tribes to prepare funding request for Eligible Mitigation Actions. Decree, Appx. D, Section 2.1.1.
- 10% for actual administrative expenditures associated with implementing Eligible Mitigation Actions. Decree, Appx. D-2 at 10.

While this amount is helpful to defray the cost of proposing and implementing mitigation projects, it does not fully recognize the realities of tribal expertise and administration.

As compared with the states, tribes have smaller staffs with fewer existing projects in place. Many tribes will need to conceive, develop, and implement many of the mitigation programs from scratch, and we are hopeful the tribes will need to consider more than simply what trucks to buy or which vehicles need replacement engines. Without the flexibility to allocate necessary resources to professional assistance and administering the programs, tribes will be forced to spend their allocated money on short-term projects rather than laying the foundation for a long-term, self-sustaining mitigation effort that would better accomplish the stated goal of the decree.

Accordingly, we propose that those amounts be increased to provide that awards under the Tribal Allocation Subaccount can expend up to 15% (an increase of 10%) towards technical assistance to enable tribes to prepare funding requests for Eligible Mitigation Actions and up to 15% (an increase of 5%) for actual administrative expenditures associated with implementing Eligible Mitigation Actions.

5. The Waiver Must be Clarified and Indian Tribes Should Receive a Portion of any Penalties or Fines Allocated to Participating States

The Tribe is concerned about the waiver of claims clause contained in section 4.2.6 of Appendix D to the Consent Decree. Specifically, it appears that they are asked to release their claims for injunctive relief and the right to bar 2.0 Liter Subject Vehicles from Indian land without receiving the same consideration as other states. The tribes are giving up legal rights in exchange for receiving a "lottery ticket," which may never pan out. That clause should be clarified by including or referencing the reservation of rights language contained in the Consent Decree so that all beneficiaries of the mitigation fund, including the Nation, are entitled to a reservation of rights equivalent to that held by the U.S. and California.

Further, and to the extent any stipulated penalty or other penalty payments are collected in connection with this consent decree and are distributed to participating states, Indian Tribes should receive a comparable percentage of these penalties. Discretion should be vested in the Tribal Trustee to determine the proper use of those funds.

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Thank you for your consideration of the comments of the Eastern Band of Cherokee Indians. Please do not hesitate to contact me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'J Hyatt', with a long horizontal flourish extending to the right.

Jeremy Hyatt
Secretary, Administration and Public Works
EASTERN BAND OF CHEROKEE INDIANS

Attachment

cc: Phil Brooks, Environmental Protection Agency



Statement on Proposed Terms of the VW Settlement for Indian Tribes

DR. FRANK ACKERMAN

PRINCIPAL ECONOMIST, SYNAPSE ENERGY ECONOMICS

AUGUST 5, 2016

[REDACTED], specializing in the economics of energy, climate change and other environmental problems. [REDACTED] numerous books, research articles, and professional reports for government agencies and for non-governmental organizations. [REDACTED] on the economics of electric utilities in regulatory hearings in several states, and on the economics of climate policy in hearings in Congress in Washington DC, and in the European Parliament in Brussels, Belgium.¹

The purpose of this comment is to discuss the proposed terms of the VW settlement, as it affects Indian tribes. Although the settlement offers roughly \$50 million to Indian tribes to mitigate emissions of nitrogen oxides (NOx), it imposes an unnecessarily restrictive definition of eligible mitigation actions.² A broader definition of mitigation actions could encompass multiple measures, recognized in other government documents as reducing NOx emissions. This could lead to more effective mitigation, and would make a more enduring contribution to the economic and social development of Indian country.

The eligible mitigation actions, as proposed in the settlement, consist almost entirely of replacement of old diesel engines with newer, cleaner alternatives. Large and medium trucks, buses, locomotives, ferries and tugboats, equipment in ocean ports and airports, and forklifts can be repowered or replaced with cleaner alternatives. In addition, 15 percent of the funds received by each tribe can be spent on equipment for electric vehicle charging or hydrogen fuel cell refueling. And funds can be used for the non-federal match under the Diesel Emission Reduction Act (DERA), an existing federal program that supports a similar range of options for replacing old diesel engines.³ That is the entire list of eligible mitigation actions in the proposed settlement.

Old diesel engines are an important source of NOx emissions – but not the only source. If the goal is to emit less NOx, or more generally to reduce pollution, then the list of eligible mitigation actions should include anything that leads to verifiable emission reductions. Some alternative emission

¹ See Department of Justice Consent Decree, Appendix D-2, available at <https://www.vwcourtsettlement.com/en/>.

³ DERA also includes funding for replacement of off-road diesels in construction, mining and other industries, in addition to the types of vehicle and equipment upgrades that are eligible mitigation actions under the VW Settlement.



reduction measures, which EPA has included in its analyses of NOx, may be more relevant on Indian reservations, and more valuable to the tribes.

One of the most extensive analyses of NOx emissions appears in EPA's Regulatory Impact Assessment (RIA) for ozone standards, published in 2008.⁴ NOx is one of the precursors of ground-level ozone, and control of ozone requires control of NOx emissions. NOx control strategies considered in the ozone RIA include:⁵

- emission controls at selected heavy industries
- emission controls at power plants
- emission controls at municipal waste and medical waste incinerators
- decreased use of older, polluting wood stoves
- upgrading space heaters and water heaters, and switching to cleaner heating fuels
- adoption of low-emission light vehicles; and
- replacing old, large diesel engines.

Although diesel engines were important, they did not account for a majority of baseline NOx emissions, or of the opportunities for near-term NOx reduction identified by EPA.⁶

Several of EPA's suggested measures may be relevant for NOx emission reduction on Indian reservations. Older wood stoves and fireplaces may still be significant sources of NOx in some areas (although some reservations have already replaced these with newer heating systems). In such cases, newer heating systems can reduce NOx and other air pollution, and improve the quality of life for Indian households.

Power plants are important sources of NOx emissions, particularly coal-burning plants, and to a lesser extent, older natural gas plants that have not installed modern pollution controls. These emissions can be reduced by adoption of energy efficiency measures and development of renewable energy sources on reservations – even if the power plants are located elsewhere.

Energy efficiency measures, such as LED lighting, better insulation, and more efficient heating systems will reduce the demand for electricity, often at very low cost. When such measures are adopted on a reservation, less electricity is generated by the utility, or the regional power pool, that supplies energy to the reservation. If the reduction in generation occurs at a coal-burning plant or an older gas plant, one result is a reduction in NOx emissions.

⁴ EPA, "Final Ozone NAAQS Regulatory Impact Analysis", https://www3.epa.gov/ttnecas1/regdata/RIAs/452_R_08_003.pdf.

⁵ *Ibid.*, Tables 2.2 and 3.2.

⁶ *Ibid.*, Figure 3.10 and Table 3.3.



Therefore, in areas dependent on coal-burning power plants, energy efficiency is an important strategy for NO_x reduction. The power plant may be located far from the reservation, but the change in the plant's emissions is caused by the adoption of efficiency measures on the reservation. Moreover, efficiency measures often make buildings more comfortable, providing an added benefit to residents.

For exactly the same reason, development of renewable energy on reservations can reduce NO_x emissions at power plants. Many reservations have excellent wind and solar resources, implying low costs for development of renewable energy. Some also have potential for expansion of hydroelectric or biomass energy. Every kilowatt-hour of renewable energy generated on a reservation displaces a kilowatt-hour of electricity generated in a power plant. Thus for reservations that are currently receiving electricity from coal-burning power plants, renewable energy will reduce NO_x emissions from electricity generation, just as energy efficiency does. Renewable energy development will, in addition, create new enterprises and jobs that will contribute to economic growth on reservations.

Another opportunity for NO_x reduction concerns low-emission light vehicles (cars and light trucks). The list of eligible mitigation activities in the proposed settlement includes only a modest allocation to low-emission vehicle infrastructure – and limits that infrastructure to electric vehicles and hydrogen fuel cell vehicles. On a number of reservations, compressed natural gas (CNG) vehicles are a more realistic low-emission alternative. The goal of reducing NO_x emissions from vehicles could be pursued by expanding CNG infrastructure and vehicle use, which seems more likely to succeed than selling Teslas in Indian country.

In summary, there are a number of areas where actions taken on reservations could reduce NO_x emissions. Such actions extend far beyond the upgrades or replacements of old diesel engines that are called for in the proposed settlement terms. Replacing older wood stoves or fireplaces with newer heating systems; promoting energy efficiency and development of renewable energy; and expansion of CNG infrastructure could all lead to NO_x reductions. They would, at the same time, strengthen the economic and social development of the reservations.

For all of these reasons, I recommend that that the proposed settlement terms should be modified to accept a much broader definition of eligible mitigation actions, at least for Indian Tribes, including a wide range of measures that lead to verifiable reductions in NO_x emissions. Many of these alternatives will be more readily available and of greater benefit to the tribes than the current narrow focus on large diesel engines.





Frank Ackerman, Principal Economist

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PROFESSIONAL EXPERIENCE

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Consults on issues of energy economics, environmental impacts, climate change policy, and environmental externalities valuation.

Massachusetts Institute of Technology, Cambridge, MA. *Lecturer, Department of Urban Studies and Planning*, 2014 – present.

Teaches graduate seminars on “Electricity, Economics, and Environment” and “Climate Economics and Policy.”

Stockholm Environment Institute – US Center, Somerville, MA. *Senior Economist and Director of Climate Economics Group*, 2007 – 2012.

Wrote extensively for academic, policy, and general audiences, and directed studies for a wide range of government agencies, international organizations, and nonprofit groups.

Tufts University, Global Development and Environment Institute, Medford, MA. *Senior Researcher*, 1995 – 2007.

Editor of GDAE’s *Frontier Issues in Economic Thought* book series, a coauthor of GDAE’s macroeconomics textbook, and Director of the institute’s Research and Policy program. Taught courses in the Tufts Department of Urban and Environmental Policy and Planning.

Tellus Institute, Boston, MA. *Senior Economist*, 1985 – 1995.

Responsible for research and consulting on aspects of economics of energy systems and of solid waste and recycling.

University of Massachusetts, Amherst, and Boston, MA. *Visiting Assistant Professor of Economics*, 1982 – 1984.

Dollars and Sense, Somerville, MA. *Editor and Business Manager*, 1974 – 1982.

EDUCATION

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Doctor of Philosophy in Economics, 1975

Swarthmore College, Swarthmore, PA
BA in Mathematics and Economics, 1967

AFILIATIONS

Economics for Equity and the Environment (E3 Network), Portland, OR

Co-founder and steering committee member, 2007 – present

Center for Progressive Reform, Washington, DC

Member scholar, 2002 – present

BOOKS

Ackerman, F., E. A. Stanton. 2014. *Climate Change and Global Equity*. London: Anthem Press.

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- Ackerman, F. 2009. *Financing the Climate Mitigation and Adaptation Measures in Developing Countries*. Prepared as G-24 Discussion Paper No. 57 for United Nations Conference on Trade and Development. Previously published as Stockholm Environmental Institute (SEI-US) Working Paper WP-US-0910.

TESTIMONY (RECENT)

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Point Energy Center. On behalf of Riverkeeper, Scenic Hudson, and Natural Resources Defense Council. June 26, 2015 and August 10, 2015.

Commonwealth of Kentucky, Kentucky Public Service Commission (Case No. 2013-00199): Direct testimony regarding the Application of Big Rivers Electric Corporation for a General Adjustment in Rates. On behalf of Ben Taylor and the Sierra Club. October 28, 2013.

State of Nevada, Public Utilities Commission of Nevada (Docket No. 13-07021): Direct testimony regarding the proposed merger of NV Energy, Inc. and MidAmerican Energy Holdings Company. On behalf of the Sierra Club. October 24, 2013.

Commonwealth of Kentucky, Kentucky Public Service Commission (Case No. 2012-00535): Direct testimony regarding the Application of Big Rivers Electric Corporation for a General Adjustment in Rates. On behalf of Ben Taylor and the Sierra Club. May 24, 2013.

State of Indiana, Indiana Utility Regulatory Commission (Cause No. 44217): Direct testimony regarding Duke Energy Indiana's Certificates of Public Convenience and Necessity. On behalf of Citizens Action Coalition, Sierra Club, Save the Valley, and Valley Watch. November 29, 2012.

United States Congress House Committee on Energy and Commerce (Hearing on "The American Clean Energy and Security Act of 2009"): Direct testimony titled "Climate Change: The Costs of Inaction" explaining the economic implications for the United State of natural disasters and resource demands as a result of global climate change. April 22, 2009.

United States Congress House Committee on Energy and Commerce, Subcommittee on Energy and Environment (Hearing on "The Climate Crisis: National Security, Public Health, and Economic Threats"): Direct testimony titled "Climate Change: The Costs of Inaction" explaining the economic implications for the United State of natural disasters and resource demands as a result of global climate change. February 12, 2009.

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. *Principal Economist*, 2012 – present.

Consults on issues of energy economics, environmental impacts, climate change policy, and environmental externalities valuation.

Massachusetts Institute of Technology, Cambridge, MA. *Lecturer, Department of Urban Studies and Planning*, 2014 – present.

Teaches graduate seminars on “Electricity, Economics, and Environment” and “Climate Economics and Policy.”

Stockholm Environment Institute – US Center, Somerville, MA. *Senior Economist and Director of Climate Economics Group*, 2007 – 2012.

Wrote extensively for academic, policy, and general audiences, and directed studies for a wide range of government agencies, international organizations, and nonprofit groups.

Tufts University, Global Development and Environment Institute, Medford, MA. *Senior Researcher*, 1995 – 2007.

Editor of GDAE’s *Frontier Issues in Economic Thought* book series, a coauthor of GDAE’s macroeconomics textbook, and Director of the institute’s Research and Policy program. Taught courses in the Tufts Department of Urban and Environmental Policy and Planning.

Tellus Institute, Boston, MA. *Senior Economist*, 1985 – 1995.

Responsible for research and consulting on aspects of economics of energy systems and of solid waste and recycling.

University of Massachusetts, Amherst, and Boston, MA. *Visiting Assistant Professor of Economics*, 1982 – 1984.

Dollars and Sense, Somerville, MA. *Editor and Business Manager*, 1974 – 1982.

EDUCATION

Harvard University, Cambridge, MA
Doctor of Philosophy in Economics, 1975

Swarthmore College, Swarthmore, PA
BA in Mathematics and Economics, 1967

AFILIATIONS

Economics for Equity and the Environment (E3 Network), Portland, OR

Co-founder and steering committee member, 2007 – present

Center for Progressive Reform, Washington, DC

Member scholar, 2002 – present

BOOKS

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Point Energy Center. On behalf of Riverkeeper, Scenic Hudson, and Natural Resources Defense Council. June 26, 2015 and August 10, 2015.

Commonwealth of Kentucky, Kentucky Public Service Commission (Case No. 2013-00199): Direct testimony regarding the Application of Big Rivers Electric Corporation for a General Adjustment in Rates. On behalf of Ben Taylor and the Sierra Club. October 28, 2013.

State of Nevada, Public Utilities Commission of Nevada (Docket No. 13-07021): Direct testimony regarding the proposed merger of NV Energy, Inc. and MidAmerican Energy Holdings Company. On behalf of the Sierra Club. October 24, 2013.

Commonwealth of Kentucky, Kentucky Public Service Commission (Case No. 2012-00535): Direct testimony regarding the Application of Big Rivers Electric Corporation for a General Adjustment in Rates. On behalf of Ben Taylor and the Sierra Club. May 24, 2013.

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Resume dated October 2015



Edison Electric
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Power by Association

**In re: Volkswagen “Clean Diesel” Marketing, Sales Practices,
and Products Liability Litigation**
Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386

July 15, 2016

The Edison Electric Institute (EEI) appreciates the opportunity to offer these comments on the proposed Partial Consent Decree (Decree) published in the *Federal Register* on July 6, 2016. *See* 81 *Fed. Reg.* 44,051.

EEI is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and directly and indirectly employ more than one million workers. In addition to operating the electric grid that powers electric transportation, EEI’s members have a long history of supporting electric transportation through research and development, leading by example with their own fleets and employees, and facilitating customer adoption of electric transportation as advisors and solution providers.

EEI’s comments are limited to two elements of the proposed Decree: the ZEV Investment Commitment (Appendix C of the Decree) and the Environmental Mitigation Trust (Appendix D of the Decree). Through the ZEV Investment Commitment and the Environmental Mitigation Trust, the proposed Decree would offer a significant opportunity to mitigate emissions in the near-term while accelerating the deployment of electric transportation technologies that will offer lasting emission reduction benefits. It is important that this opportunity be used effectively and leveraged to maximum impact. With that goal in mind, EEI wishes to make the following three points:

- 1) Electrification is the most effective pathway to reduce both criteria pollutant and greenhouse gas (GHG) emissions from transportation
- 2) Electric companies are critical stakeholders and must be included in investment planning
- 3) Investments should be prioritized and targeted strategically

The following commentary explores these three points in more detail.

1) Electrification is the most effective pathway to reduce both criteria pollutant and GHG emissions from transportation

Transportation sector GHG emissions recently surpassed electric power sector GHG emissions in the U.S. for the first time in 37 years.¹ Two trends are at play here. First, the electric power industry has reduced GHG emissions by more than 20% below 2005 levels as of the end of 2015, driven largely by the shift to natural gas generation and investments in renewable energy. Second, transportation emissions have crept upward over the last four years as low gasoline prices, increased driving miles, and consumer preferences for larger vehicles have outweighed vehicle fuel efficiency improvements.

The most promising pathway to significantly reduce transportation sector emissions is to connect the transportation sector to the increasingly clean electric power system. A number of studies have called for the need for widespread transportation electrification to meet GHG reduction goals.² The recent, rigorous study by EPRI and NRDC to model the impacts of widespread transportation electrification found that cross-sector emissions were reduced 48 percent between 2015 and 2050.³

The same effect is true for criteria pollutants that impact air quality. Between 1990 and 2014, the electric power industry reduced NO_x emissions by 83% and SO₂ emissions by 85%.⁴ The aforementioned EPRI-NRDC study found that cross-sector air quality benefits from transportation electrification are modest but widespread. The study found electrification of non-road equipment (such as the Eligible Mitigation Actions under the Environmental Mitigation Trust) “provides significant air quality benefits, in some cases greater than those of on-road electrification, particularly in urban areas.”⁵

Electrification leverages the investments already being made in the electric power sector to reduce emissions for the benefit of the transportation sector. EEI applauds the proposed Decree for including transportation electrification prominently under the qualifying actions for both the ZEV Investment Commitment and the Environmental Mitigation Trust.

¹ EIA, Monthly Energy Review, July 2016, <http://www.eia.gov/totalenergy/data/monthly/>

² See referenced studies in *Driving Out Pollution: How Utilities Can Accelerate the Market for Electric Vehicles*, NRDC, <https://www.nrdc.org/sites/default/files/driving-out-pollution-report.pdf>

³ *Environmental Assessment of a Full Electric Transportation Portfolio, Volume 2: Greenhouse Gas Emissions*, EPRI-NRDC, <http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?productId=000000003002006876>

⁴ EIA, Electricity Detailed State Data, <https://www.eia.gov/electricity/data/state/>

⁵ EPRI-NRDC, *Environmental Assessment of a Full Electric Transportation Portfolio, Volume 3: Air Quality Impacts*, <http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?productId=000000003002006880>

2) Electric companies are critical stakeholders and must be included in investment planning

a) Ensure affordable, reliable deployment

Electric companies have built a ubiquitous, safe, and reliable power grid. Electric transportation benefits from a clean, alternative fuel distribution system that is already in place. A number of studies⁶ and real world experience⁷ have shown that the grid can accommodate electric vehicles with minimal distribution upgrade costs. To the extent that the marginal cost to serve vehicle charging is low, and the revenue from the additional load exceeds that cost, electric transportation has the effect of putting downward pressure on electricity rates. This increased system utilization, along with GHG, air quality, and cost savings for consumers and communities, is part of the reason why all customers benefit from electric transportation, not just EV drivers.

In order to minimize the marginal cost of serving electric transportation load, and ensure affordable, reliable charging infrastructure deployment for all customers, it is imperative that infrastructure investments associated with the proposed Decree be made in collaboration with local electric companies. Electric companies can help to locate charging infrastructure on circuits with adequate capacity to avoid upgrades. If distribution upgrades are needed, a collaborative effort will allow for proper planning to minimize the cost. Furthermore, creative approaches to pricing, load management, and other strategies that will allow vehicle load to be utilized as a grid asset – and potentially reduce costs to end users – will only be implemented in collaboration with electric companies. Electric companies also have a shared interest with automakers in providing a consistent, reliable, affordable customer experience, which can only be achieved with cross-sector collaboration.

Failing to consider the distribution system infrastructure that supplies charging stations could result in unanticipated project costs. For example, the proposed Decree does not appear to contemplate distribution grid upgrade costs in its description of a ZEV Investment in infrastructure (Appendix C, 1.10.1). Distribution system upgrades that are needed to serve a particular installation are borne by the customer incurring the additional load, typically the site host for the charging stations. Distribution upgrade costs could be significant, particularly for high power DC fast charging installations. Collaboration with electric companies is needed to fully assess these costs and recover them in a way that is beneficial to all customers while supporting the goals of the proposed Decree.

⁶ See *California Transportation Electrification Assessment, Phase 2: Grid Impacts*, Energy and Environmental Economics, http://www.caletc.com/wp-content/uploads/2014/10/CalETC_TEA_Phase_2_Final_10-23-14.pdf; and *Transportation Electrification Strategy*, Seattle City Light, <http://www.seattle.gov/Documents/Departments/CityLightReviewPanel/Documents/EV-PresentationToRPfor-12-08-2015.pdf>

⁷ *Joint Load Research Report*, San Diego Gas & Electric Company, Southern California Edison Company, and Pacific Gas and Electric Company, <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M143/K954/143954294.PDF>

Electric companies have an obligation to serve all customers, meaning infrastructure investments undertaken as a result of the proposed Decree will be interconnected to the larger power grid, regardless of whether electric companies are consulted in advanced. However, it is in the best interest of all parties to optimize these investments and to avoid undue costs by bringing to bear the analysis and experience of electric companies to improve the planning, implementation, and operation of these investments.

b) Electric companies are making investments today that should be leveraged

As experts in building and operating the power grid, a growing number of electric companies are extending their infrastructure investments to include electric vehicle charging. A non-comprehensive list of these investments is shown below:

Electric Company, Program	Program Description
San Diego Gas & Electric, <i>Power Your Drive</i> ⁸	\$45 million; install, own, and operate 3,500 charging stations at multi-unit dwellings and workplaces; time variant rate encourages smart charging
Southern California Edison, <i>Charge Ready</i> ⁹	\$22 million; install, own, and operate “make ready” infrastructure for up to 1,500 charging stations at long-dwell locations with additional funds for charging station rebates and market education
Kansas City Power & Light, <i>Clean Charge Network</i> ¹⁰	\$20 million; install, own, and operate network of 1,000+ charging stations, including 15 DC fast chargers
Georgia Power, <i>Get Current. Drive Electric</i> ¹¹	\$12 million; install, own, and operate a public Community Charging Network of 20+ charging locations with DC fast chargers
Avista Utilities, <i>EVSE Pilot Program</i> ¹²	\$3 million; install, own, and operate 272 charging port connections, including 7 DC fast chargers

Charging infrastructure deployed as part of the proposed Decree should be complementary to the electric company programs that are underway and forthcoming. Proceeding without collaboration with electric companies risks creating a charging system that is inconsistent, redundant, or sub-optimally located. Conversely, proceeding in collaboration with electric companies allows the investments associated with the Decree to leverage ongoing and future electric company investments, creating a multiplier effect. Parties to the proposed Decree that approve investment plans made under both the ZEV Investment Commitment and the Environmental Mitigation Trust

⁸ San Diego Gas & Electric, <http://www.sdge.com/clean-energy/electric-vehicles/poweryourdrive>

⁹ Southern California Edison, <http://www.edison.com/home/our-perspective/charge-ready-a-plan-for-california.html>

¹⁰ Kansas City Power & Light, <http://www.kcpl.com/about-kcpl/environmental-focus/clean-charge-network>

¹¹ Georgia Power, <https://www.georgiapower.com/about-energy/electric-vehicles/>

¹² Avista Utilities, <http://avistacorp.mwnewsroom.com/News/in/Avista-Launches-Electric-Vehicle-Supply-Equipment->

should give preference to plans that take advantage of synergistic opportunities that leverage additional funding resources and spur new investment.

The proposed Decree could potentially put at risk other investments in electric vehicle charging infrastructure if the Decree investments are perceived as eliminating the need for outside investment. Stakeholders must jointly make the case that investments from electric companies *and* VW – and much more – are needed to ensure a thriving electric vehicle market. As an illustration, the original proposals made by electric companies in California collectively would have invested \$1.1 billion to install more than 60,000 charging stations throughout the state,¹³ yet this would address only 25%-33% of the infrastructure needed to support the state’s goals. Ensuring that the investments associated with the proposed Decree are additive to – and do not displace – electric company investments will only amplify the impact of the Decree and further accelerate the electric transportation market.

3) Investments should be prioritized and targeted strategically

The funds available to the ZEV Investment Commitment and the Environmental Mitigation Trust, while considerable, are not sufficient to “solve” the electric vehicle infrastructure need in the U.S. Investment plans that try to cover all bases at once will be spread far too thin. Instead, investments should be targeted to provide maximum impact. Furthermore, this large influx of funds is a unique opportunity to develop comprehensive, national plans with stakeholders that leverage outside sources of funding.

a) Include Highway DCFC and urban charging

While the definition of infrastructure that qualifies under the ZEV Investment Commitment (Appendix C, 1.10.1) and the Environmental Mitigation Trust (Appendix D-2, 9) is broad, we wish to emphasize two types of infrastructure that are particularly well suited for investments associated with the proposed Decree: DC fast charging along interstate travel corridors and community-based DC fast charging “hubs.” The use cases for these infrastructure types are different (corridor charging supports long-distance travel, while community charging supports urban mobility) but the challenges associated with both are similar: high-power requirements, high upfront costs, and the need to coordinate across regions.

VW’s ability through the proposed Decree to take a national, comprehensive view toward charging infrastructure and large, strategic investments make these infrastructure types particularly good candidates for funding. In addition, interstate corridor charging could leverage existing efforts to build out such a network (such as CMAQ funding for projects along Alternative Fueling Corridors¹⁴), while community fast charging could support a wide variety of sustainable transportation options within cities and communities (such as

¹³ See proceedings at California Public Utilities Commission, <http://www.cpuc.ca.gov/General.aspx?id=5597>

¹⁴ *Congestion Mitigation and Air Quality Improvement Program*, Federal Highway Administration, <http://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm>

those contemplated by the U.S. Department of Transportation's Smart City Challenge¹⁵). Furthermore, as more automakers plan for long-range battery-electric vehicles¹⁶, the need for a comprehensive fast charge network is becoming more urgent.

The 10-year timeframe of the ZEV Investment Commitment allows for a phased approach. The types of infrastructure needed and the timeframe over which they are needed may vary by community. While we support all infrastructure types as appropriate, near-term priority on corridor- and community-based charging may be needed to support electric vehicle growth.

b) Include truck stop electrification and eTRUs

EEI applauds the inclusion of a broad set of transportation applications under the Environmental Mitigation Trust. However, we believe the Eligible Mitigation Actions (Appendix D-2) should include two additional applications: Truck Stop Electrification (TSE) and Electric Transportation Refrigeration Units (eTRUs). TSE demonstrated the highest "per-unit" net benefit of all the commercial and non-road technologies considered by the Phase 3-Part A California Transportation Electrification Assessment.¹⁷ eTRUs suffer from a misalignment of incentives as facility owners, which must provide plug-in stations, do not own (or benefit from) the eTRU equipment adopted by truck drivers. Both of these technologies are "low hanging fruit" that would benefit greatly from the Environmental Mitigation Trust funds, while producing significant impacts.

c) Ensure activities do not overlap but complement

A number of the Eligible Mitigation Actions (Appendix D-2) under the Environmental Mitigation Trust have the potential to overlap with investments contemplated under the ZEV Investment Commitment. These include charging infrastructure for light-duty vehicles (Appendix D-2, 9) and infrastructure that could support electric medium- and heavy-duty vehicles (e.g., Appendix D-2 sections 1, 2, and 6). Consideration should be taken to ensure that the ZEV Investment Plans are cross-referenced with state Beneficiary Mitigation Plans to ensure that investments are complementary, additive, and not duplicative. Since electric companies will have visibility into electric infrastructure deployments in their territory under both elements of the proposed Decree, they are natural partners to assist in the planning and implementation of Decree investments.

¹⁵ *Smart City Challenge*, U.S. Department of Transportation, <https://www.transportation.gov/smartcity>

¹⁶ *Ford Plans Long-Range Electric Car to Compete With Tesla*, GM, Bloomberg, <http://www.bloomberg.com/news/articles/2016-04-28/ford-plans-long-range-electric-car-to-compete-with-tesla-gm>

¹⁷ <http://www.caletc.com/wp-content/uploads/2016/01/California-Transportation-Electrification-Assessment-Phase-3-Part-A.pdf>



Edison Electric
INSTITUTE

Power by Association

August 5, 2016

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**In re: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products
Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-
11386.**

Filed via e-mail: pubcomment-ees.enrd@usdoj.gov

The Edison Electric Institute (EEI) appreciates the opportunity to offer these comments on the proposed Partial Consent Decree (Decree) published in the *Federal Register* on July 6, 2016. See 81 *Fed. Reg.* 44,051.

EEI is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and directly and indirectly employ more than one million workers. In addition to operating the electric grid that powers electric transportation, EEI’s members have a long history of supporting electric transportation through research and development, leading by example with their own fleets and employees, and facilitating customer adoption of electric transportation as advisors and solution providers.

EEI’s comments are limited to two elements of the proposed Decree: the ZEV Investment Commitment (Appendix C of the Decree) and the Environmental Mitigation Trust (Appendix D of the Decree). Through the ZEV Investment Commitment and the Environmental Mitigation Trust, the proposed Decree would offer a significant opportunity to mitigate emissions in the near-term while accelerating the deployment of electric transportation technologies that will offer lasting emission reduction benefits. It is important that this opportunity be used effectively and leveraged to maximum impact.

Please direct any questions you have about these to Kellen Schefter (kschefter@eei.org, 202-508-5511).

Sincerely,

Kellen Schefter
Manager, Sustainable Technology



BY EMAIL

August 5, 2016

John C. Cruden
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RE: COMMENTS ON THE PROPOSED PARTIAL CONSENT DECREE IN RE: VOLKSWAGEN “CLEAN DIESEL” MARKETING, SALES PRACTICES, AND PRODUCTS LIABILITY LITIGATION, CASE NO: MDL No. 2672 CRB (JSC)

I. INTRODUCTION

Environmental Defense Fund (EDF) appreciates the opportunity to comment on the proposed Partial Consent Decree lodged by the Department of Justice (DOJ) with the United States District Court for the Northern District of California in the lawsuit entitled *Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products Liability Litigation*, Case No: MDL No. 2672 CRB (JSC) (VW Settlement).¹ EDF is a non-profit, non-partisan, non-governmental environmental organization that combines law, policy, science, and economics to find solutions to today’s most pressing environmental problems. We respectfully submit these comments on behalf of our more than one million members who support cleaner air and climate security. We comment on the proposed VW Settlement as a clean air advocate and environmental justice stakeholder, working to help address impacts on overburdened communities and partnering with environmental justice organizations on overlapping issues.

The proposed VW Settlement includes a \$2.7 billion Environmental Mitigation Trust Agreement to mitigate the irreparable harm that resulted from excess emissions of nitrogen oxides (NO_x) from 2009-2015 diesel vehicles due to *deliberately-installed* defeat devices. As a result of VW’s actions, NO_x emissions were up to 40 times greater than allowed by the U.S. Environmental Protection Agency’s (EPA’s) diesel vehicle emission exhaust standards that exist to protect both human health and the environment. As a precursor to the formation of ozone—a

¹ Notice of Lodging of Proposed Partial Consent Decree Under the Clean Air Act, 81 Fed. Reg. 44051 (July 6, 2016). Pursuant to Clean Air Act section 113(g), 42 U.S.C. § 7413(g), before a Consent Decree may be finalized and entered by the Court, EPA must provide notice in the Federal Register and an opportunity for persons who are not named as parties or intervenors to the action or matter to comment in writing.

criteria air pollutant for which the EPA has set a National Ambient Air Quality Standard—NO_x emissions are critically important given the well-documented cardiopulmonary and respiratory health impacts associated with ground-level ozone exposure and secondary formation of particulate aerosols. Two studies have already estimated human health impacts from VW's actions at 46² to 59³ deaths, in addition to other impacts. EDF strongly urges DOJ to 1) ensure that VW is held fully accountable for their actions that have caused such harm, and 2) ensure that federal agencies have the resources and tools to monitor compliance and conduct enforcement actions to avoid a similar public health disaster in the future.

The proposed VW Settlement also includes a \$2.0 billion Zero-Emission Vehicle (ZEV) Investment Commitment over a ten year time period to support increased use of these technologies. EDF believes that this investment can provide a critical market stimulation boost to the electric vehicle (EV) industry, and if deployed in building out charging infrastructure, supporting research and development and lowering barriers to access, can help ensure that the glidepath towards reducing the environmental impacts of passenger vehicles is solidified.

EDF's comments on the Environmental Mitigation Trust Agreement encourage DOJ to include funds for asthma clinics to directly address the health impacts that have already occurred because of VW's deliberate actions, encourage the use of the Diesel Emissions Reduction Act (DERA) program as a model for project eligibility and selection criteria because of its demonstrated effectiveness for reducing emissions, and accelerate the transition to zero-emissions in the transportation sector. Additionally, EDF strongly encourages that these funds be *surplus* to existing efforts to reduce emissions (*e.g.*, DERA, Congestion Mitigation and Air Quality Improvement Program). EDF's comments on the proposed ZEV Investment Commitment focus on increasing EV charging stations, bolstering research and development efforts, and ensuring that a growing EV population is managed in a way that maintains a competitive market and a reliable grid, as well as facilitating a reduction in harmful air pollution.

II. ENVIRONMENTAL MITIGATION TRUST AGREEMENT

a. Funding Asthma Clinics in Environmental Justice and Tribal Communities

NO_x emissions from the illegal VW vehicles contribute to ozone pollution, which has a direct impact on the health of environmental justice and tribal community members. Many of these community members lack the resources or access to the health clinics needed to address the asthma and related health impacts from breathing ozone pollution. While the current settlement addresses the mitigation of future NO_x emissions, it does not directly address the health impacts from the higher concentrations of both ozone and secondary formation of particulates related to the excess emissions from the illegal VW vehicles.

² Holland *et al.*, 2016. Damages and expected deaths due to excess NO_x emissions from 2009 to 2015 Volkswagen diesel vehicles. *Environ. Sci. Technol.*, 2016, 50 (3): 1111–1117.

³ Barrett *et al.*, 2015. Impact of the Volkswagen emissions control defeat device on US public health. *Environ. Res. Lett.* 10: 114005.

EDF recommends that at least \$100 million of the settlement money be used to fund asthma clinics in environmental justice and tribal communities. Additional asthma clinics in these communities would help those impacted by the excess NO_x emissions that are also least likely to be able to afford adequate health care. Specific uses for the grant funds could include hiring full-time nurses for schools; training for school nurses, coaches, and administrators in asthma recognition and treatment; provision of spirometers and other equipment for asthma screenings; and public education about asthma, its causes/triggers, as well as treatment options.

Use of funding provided under the proposed VW Settlement to address health impacts and ensure health protections in the future is critically important. Benefits from this settlement should be broadly shared to provide protections to all who have suffered harm, including low-income communities, communities who are disproportionately impacted from air pollution, and tribal communities. Others, such as the American Lung Association, have also provided feedback supporting use of funds to protect public health, and EDF supports these comments.

b. Use DERA Project Eligibility and Selection Criteria

EPA's DERA program has been an effective program for reducing emissions from in-use diesel engines. The guidance developed by EPA to implement the DERA program and issue over \$520 million in grant funds has become an effective standard familiar to all state air quality agencies and many tribes. The current settlement agreement creates the potential for each state and tribe to develop new and different grant guidance and procedures. Not only would this waste mitigation funds spent on administrative overhead, it could create major difficulties for the Trustee who is responsible for ensuring that the funds are effectively spent. Using consistent project eligibility and selection criteria will help the Trustee meet their fiduciary responsibility. Another key benefit of using DERA project criteria is that prioritization for funding includes requirements to ensure air quality improvements in areas where they are most needed, through specifying that "public health benefits are maximized" or that they "occur in areas that receive a disproportionate quantity of air pollution from diesel fleets, including ports, rail yards, truckstops, terminals, and distribution centers."⁴ EDF recommends that the Trustee, to the extent practicable, be provided the authority to require states and tribes to use the same project eligibility and selection criteria, including rebates, developed and implemented by DERA.

Alternatively, if a DERA approach were not to be used, the Trustee should require that a state or tribe complete a public review process to consider stakeholder comments for the development of a program that will select projects for funding with settlement proceeds. In the case of states like California and Texas, which have already developed their own robust diesel emission reduction programs, EDF recommends the Trustee allow these states to use their current administrative procedures.

In terms of eligible projects, EDF also recommends that the consent decree clarify that the Trustee may allow states and tribes to fund any project eligible for funding under the DERA program, or that have been verified or certified by the EPA or the California Air Resources

⁴ See 792(c)(4) of the Energy Policy Act of 2005.

Board (CARB). For example, CARB has recently verified two bonnet technologies^{5,6} that reduce emissions from cargo vessels, similar to vessel shorepower. This technology substantially reduces NOx emissions from ocean-going vessels and should be eligible, along with other EPA- and CARB-approved technologies. Other examples include electrification technologies that replace traditional diesel-powered equipment in nonroad applications (*e.g.*, electric gantry cranes at ports and battery or fuel-cell electric terminal tractors), in onroad applications (*e.g.*, truck stop electrification and electrified truck refrigeration units), and in locomotive applications (*e.g.*, locomotive shorepower and anti-idling devices not currently required by law).

EDF also recommends that for switcher locomotives and ferries/tugs, only engines meeting Tier 4 emission limits (or a zero-emission at the tailpipe equivalent) are eligible for mitigation funds. The current language states that for ferries and tugs any “Tier 3 or Tier 4” engine may be eligible. However, the NOx emission standard for Tier 3 Category 2 marine engines (~6.5g/hp-hr) is only marginally better than Tier 2 engines (~7.3g/hp-hr) and is substantially worse than Tier 4 engines (~1.3g/hp-hr). While not all vessel or equipment classes may currently have Tier 4 engines available, it would be far better to only fund Tier 4 engines, than to get only marginal NOx reductions from Tier 3 engines. It is important to note that turnover in these types of equipment occur rarely, as the useful life for vessels and locomotives may approach 40 to 50 years or more.

c. No Decrease in State Diesel Emission Grants

Many states, including California, Texas, Pennsylvania, Ohio, and Washington, currently provide substantial state funding to pay for diesel retrofits, repowers and replacements. In some cases, these projects have been included in the State Implementation Plans required under the Clean Air Act. EDF recommends that states receiving mitigation funds must certify that they will continue to fund their existing state clean diesel programs at their current level. Without this certification requiring continued state funding, it will reduce the effectiveness of the mitigation fund and result in fewer NOx reductions.

III. ZEV INVESTMENT COMMITMENT

EDF believes that investment in charging infrastructure is essential to seeing growth in light-duty EVs across the country. As such, we believe that a portion of the settlement should be used to grow the number of strategically placed charging stations—thereby reducing range anxiety, a key barrier to increased purchase and use of EVs. In addition, there is promising research in two key areas: using EV batteries that have exhausted their first life as storage⁷ and enabling energy stored in EV batteries to be distributed to the grid.⁸ Further exploring the potential for second-life batteries could prove to be important in increasing the percentage of renewable energy in the resource mix, while still maintaining reliability; it also could defray

⁵ <http://www.arb.ca.gov/ports/shorepower/eo/ab-15-02.pdf>

⁶ <http://www.arb.ca.gov/ports/shorepower/eo/ab-15-01.pdf>

⁷ https://www.law.berkeley.edu/files/ccelp/Reuse_and_Repower_-_Web_Copy.pdf

⁸ <http://drrc.lbl.gov/sites/all/files/lbnl-6154e.pdf>

electricity costs and assuage environmental concerns over battery disposal. In a similar way, if electric vehicles are broadly capable of discharging stored renewable energy back to the grid in order to offset the use of fossil fuels, such capability will be a key part of meeting state and federal clean energy goals.

Increased EV use moving forward, while critical, should be carefully crafted. To that end, ZEV investments from this settlement must ensure the following:

- **Pricing that reflects grid conditions.** Adding electric vehicles to the grid can provide tremendous benefits, but it must be done in the right way. If a majority of drivers all charge their vehicles at times when fossil fuel-based energy is the primary fuel source, this creates environmental and reliability concerns. However, if the correct pricing structures are in place, drivers will be incentivized to charge at times when there is an abundance of wind or solar.
- **Targeting the right locations for charging stations.** EDF has been a strong proponent for an increased focus on ensuring workplaces and multi-unit dwellings are equipped with charging stations, in order to better take advantage of renewable energy and allow for increased EV adoption.⁹ In addition, placement of charging stations in disadvantaged communities—who suffer disproportionately from harmful air pollution— must be a priority, as they have been in pilot efforts currently being conducted in California.¹⁰
- **Ensuring a competitive market.** In order to foster cost-effective innovation in the EV charging market, settlement funding must contemplate offerings from both utilities and third party technology providers. In other words, investment should be agnostic as to the source of the technology, but facilitate an even playing field that focuses on maximizing benefits to the environment, the energy customer, and the grid.

IV. CONCLUSION

EDF appreciates DOJ's efforts to incorporate feedback into how settlement proceeds should be distributed from the ongoing litigation with VW. We support the use of these funds for projects that will provide medical care to those impacted by the illegal emissions, future health benefits through the reduction of emissions from transportation projects, as well as accelerate our country's transition to a zero-emission future. All actions associated with this settlement must be surplus to clean air actions already in progress, since VW's deliberate actions have caused irreparable harm and impeded progress towards achieving our country's clean air goals.

If you have any questions, please contact Christina Wolfe at 512.691.3416 or cwolfe@edf.org.

⁹ See, e.g., Opening Testimony of Environmental Defense Fund, Southern California Edison EV pilot.

¹⁰ For example, EV pilots from both Southern California Edison and San Diego Gas & Electric have committed to placing at least 10 percent of charging stations in disadvantaged communities.

Sincerely,

Ken Adler
Senior Contributing Scientist

Alice Henderson
Attorney, U.S. Climate and Air

Jayant Kairam
Director, Partnerships & California Clean Energy

Larissa Koehler
Attorney, Clean Energy

Jason Mathers
Senior Manager, Supply Chain Logistics

Mark MacLeod
Director of Special Projects, Climate & Air

Christina Wolfe
Manager, Air Quality, Port and Freight Facilities

From: Desmond Wheatley
To: ENRD, PUBCOMMENT-EES (ENRD)
CC: Damon.Conklin@deweysquare.com
Sent: 8/5/2016 4:57:45 PM
Subject: Case No: MDL No. 2672 CRB (JSC).
Attachments: ATT00001.htm; ATT00002.htm; DOJ VW Settlement Letter 08-05-16 final.pdf; Envision Solar logo extra small[1].png

Assistant Attorney General

U.S. Department of Justice – ENRD

P.O. Box 7611

Washington, D.C. 20044-7611

Re: Proposed Partial Consent Decree Under the Clean Air Act
RE: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products
Liability Litigation, Case No: MDL No. 2672 CRB (JSC)

Dear Assistant Attorney General:

We, Envision Solar International, write to provide our comments and recommendations regarding Appendix C of the proposed Partial Consent Decree in the Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products Litigation. Appendix C outlines a zero emissions vehicle (ZEV) investment program to be implemented nationwide, separately from the funding allocated to vehicle buy-back and state-level NOx remediation.

As part of the Partial Consent Decree, Volkswagen has agreed to “invest \$2.0 billion over 10 years in zero emissions vehicle (ZEV) infrastructure, access and awareness initiatives,” including \$1.2 billion nationally and \$800 million in California. This is a welcome investment to increase access to clean energy technologies that will help accelerate the adoption of electric vehicles (EVs) and EV charging networks in California and across the country. Envision Solar offers these comments in a constructive way to help the Environmental Protection Agency (EPA) and California Air Resources Board (CARB) structure the program in an effective, workable manner.

This agreement is of particular importance since it comes on the heels of a landmark White House announcement that seeks to boost electric vehicles adoption and accelerate the deployment of EV charging stations across the country. Electric vehicles and EV charging are at a tipping point, and it’s important that new investments in this area complement all other existing commitments, programs, and technologies.

Therefore, we wanted to take this opportunity to share our thoughts on this matter and urge the EPA and the CARB to ensure that this Partial Consent Decree does not have improper and harmful unintended consequences for the marketplace or the environment.

Specifically, we believe that the ZEV investment program should:

Emphasize and promote the use of renewable sources of energy. Despite the White House announcement calling for an increase in access to clean energy, we have not found, anywhere in the document, language which recommends using renewable and clean sources of electricity for EV charging infrastructure. Much of the EV charging industry and the various agencies and offices charged with supporting it still consistently view connecting to an aging and polluting grid as their primary source of energy, considering renewables only when they can find no way to economically extend the grid to places where people want and need to charge. Equally harmful is the locating of EV charging infrastructure based upon easy and inexpensive grid connections rather than selecting for EV drivers' preferred dwell spots. In countless locations underutilized EV chargers stand as reminders that adequate circuits and impactful EV charging locations are rarely conveniently found in the same place. Rapidly deployed, self-contained solar powered EV chargers are ideally suited to places where people actually park.

While EVs offer a significant opportunity to reduce the pollution associated with transportation, which today accounts for about 30% of the US's GHG contributions, they are only truly emissions free when the electricity they receive comes from renewable sources. As we know, approximately 40% of our nation's GHGs are derived from the production of electricity. Greater adoption of EVs, while reducing transportation's contribution, might actually increase pollution emitted through the generation of electricity. For example, when coal plants supply the majority of the power in a given area, electric vehicles may emit more CO₂ and SO₂ pollution than hybrid EV counterparts. However, an EV powered by sun or wind generated electricity eliminates around 70% of the GHGs of an equivalent internal combustion engine.

The essence of the Partial Consent Decree is an attempt to mitigate the harm caused by the pollution of VW's diesel vehicles. Efforts should be taken by the EPA and CARB to take advantage of currently available renewably energized EV chargers to maximize the benefits the Decree delivers, rather than relying on sources of electricity which continue to pollute our air and continue our dependence on carbon fuels.

A further benefit of standalone, solar powered EV charging with incorporated energy storage is that it can be deployed rapidly and without environmental impact. Rather than waiting for weeks or months for planning, permitting, engineering, construction and electrical upgrades, a process which is often environmentally impactful in itself, a site can be provisioned with solar powered EV chargers in less than 10 minutes. Landlords and other site hosts are often unwilling to endure the time consuming, impactful and even, in their estimation, risky process of permitting and installing grid connected EV chargers. They are much more willing to do a painless and zero impact deployment of a highly visible, green haloed, EV charger, which is installed in minutes and can be moved at any time. The fact that the installation is not accompanied by an increase in utility bills with the possibility of demand and other charges is further inducement.

Increased deployment velocity will mean more EV chargers deployed faster which will, in turn, mean more EVs on the road and a greater chance of the underlying goals of the Partial Consent Decree being realized.

Finally, there is the question of energy security and grid reliability. Distributed energy resources, like solar with storage, can provide EV charging even when the grid experience outages. Reliance on the existing, aging, electrical grid is one of the greatest economic and strategic vulnerabilities faced by the US today. Just months ago, California's ISO declared that Southern California was threatened by up to 18 days of shortfall. Imagine how much worse the Southwest blackout of 2011 would have been had large numbers of citizens been relying on the grid to charge their EVs as a means to get home or pick up their children. EVs charged from locally generated and stored electricity would have been able to continue to charge. As we consider the reliability of our EV charging infrastructure, outages, natural disasters, terrorism or even state sponsored attacks cannot be ignored.

As an additional benefit, large numbers of broadly dispersed solar powered EV chargers with integrated storage will actually perform as valuable grid balancing assets. Every EV which fills up on sunshine is one less which is impacting the grid; utilities will be able to selectively grid tie to any or all of the local solar generation and storage assets for a far more effective and realistic source of grid stability than vehicle-to-grid is likely to offer. In the event that there is a catastrophic grid failure, every EV which is connected to a standalone solar powered unit will be one less problem for the authorities to deal with, while the reliable and constantly renewing power source at each station can be made available to first responders so that they can maintain their critical infrastructure.

We are aware that there remain certain misconceptions about solar powered EV chargers, chief amongst them that these products do not work at night or during cloudy conditions. In fact, correctly engineered combinations of high quality solar modules and battery storage provide extremely robust EV charging solutions that work day and night and even in prolonged inclement conditions. After many years of gather data from our deployed products we and our customers, which include, Caltrans, Google, New York City and many others, know that solar powered EV chargers work very well and very reliably. In fact more than 95% of our deployed chargers generate more energy than they dispense on a daily basis even though they are used more than average grid tied level II chargers. In the 5% of cases where our units are used so much that the sun cannot keep up the simple, impact free deployment of a second unit in the same location would more than keep up.

Promoting our EV charging infrastructure must be viewed holistically and recognize the vast array of proven technologies that are helping us to reach our air and climate goals. Instead of viewing solar powered EV chargers as a last resort for power or as an interesting but impractical "concept" piece, CARB and the EPA should first, familiarize themselves with the successful and effective deployments of such solutions and second, ensure that renewable, clean and secure energy sources often in conjunction with the utility grid, form the critical backbone of any planned EV charging infrastructure moving forward.

Sincerely,



Desmond Wheatley

President and CEO

Envision Solar International



Assistant Attorney General
U.S. Department of Justice – ENRD
P.O. Box 7611
Washington, D.C. 20044-7611

Re: Proposed Partial Consent Decree Under the Clean Air Act
RE: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products
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Sincerely,

A handwritten signature in black ink, appearing to be 'D. Wheatley', with a long horizontal flourish extending to the right.

Desmond Wheatley
President and CEO
Envision Solar International



August 5, 2016

Mr. John C. Cruden
Assistant Attorney General, Environment and Natural Resources Division
U.S. Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530-0001

pubcomment-ees.enrd@usdoj.gov

Dear Mr. Cruden:

ESW Group appreciates the opportunity to submit comments on the Partial Consent Decree with the United States District Court for the Northern District of California in the lawsuit entitled *In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation*.

ESW Group is the leading player in the U.S. on-road and off-road diesel retrofit market, with 10 CARB-verified diesel retrofit systems that offer the broadest coverage of on-road and off-road engines. The company's corporate, engineering, and manufacturing facilities are in Montgomeryville, PA, Carlsbad, CA and several other locations. ESW Group also operates ESW America, an engine emissions testing, certification and verification facility which is recognized by EPA and CARB as capable of performing engine emissions verification and certification test protocols for the OEM supply chain. For additional information please see ESW Group company website at www.eswgroup.com.

Comments on the Partial Consent Decree

1. We strongly believe that diesel engine retrofit technologies should be included in the allowable mitigation actions available to States when implementing their Environment Mitigation Plans. The Partial Consent Decree seems to overlook the fact that there are retrofit emissions control technologies that reduce NOx (and also simultaneously reduce particulate matter emissions). In order to provide the most options to the diverse population of diesel powered vehicles and machines and to preserve the greatest air quality benefits, we believe that no potential NOx or PM (Particulate Matter) reduction technology should be left out of the options made available to States. A recently released report on the cost-effectiveness of various strategies to reduce emissions with CMAQ funds identified diesel retrofits as one of the two most cost effective ways to reduce mobile sources of emissions. See: https://www.fhwa.dot.gov/environment/air_quality/cmaq/reference/cost_effectiveness_tables/report/costeff01.cfm

One example of a technology that seems to fall outside of the parameters of the Partial Consent Decree is ESW Group's Longview product, a California Air Resources Board (CARB) verified diesel retrofit device that reduces NOx by 25% and PM by 85%. Configured in a modular, user-friendly design, Longview integrates a NOx reduction catalyst and diesel particulate filter. This provides simultaneous reduction of NOx, PM, hydrocarbon (HC) and carbon monoxide (CO). Longview can be applied to a wide variety of diesel engines with model years of 1988 to 2006. Successful applications of the product include hundreds of transit buses in the San Francisco Bay Area at the

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San Francisco Municipal Transportation Agency, AC Transit, and several other agencies. Reference information is available if needed.

In addition, there are some more advanced retrofit technologies that rely on selective catalytic reduction (SCR) for major NO_x reductions which are under development. Since 2010, SCR technology has relied on liquid urea injection also known as DEF (Diesel Emission Fluid). This technology has proven to be very efficient for duty cycles that generate sufficient temperature (above 200 degrees Centigrade). Unfortunately, for duty cycles such as school buses, transit buses, and refuse trucks with frequent operation below the target temperature, DEF-based SCR systems can have disappointingly low NO_x-reduction efficiency. As an alternative to DEF, advanced retrofit technologies using direct ammonia injection as the SCR reductant have been under development. These technologies allow for the SCR system to efficiently operate at significantly lower temperature. This technology could be used very effectively as a retrofit for school buses, transit buses, and refuse trucks.

2. ESW appreciates that the Partial Consent Decree also allows states to utilize settlement funds for their DERA grant match and overmatch. This gives States additional resources to meet their local clean air initiatives goals and deadlines and utilize the fund to supplement important efforts already underway. We believe this to be a wise and environmentally helpful program component.
3. We believe greater flexibility could be given to States that have taken the initiative to create diesel emission reduction programs already in existence. For example, Oregon passed legislation in 2009 requiring school buses to be retrofitted by 2017 or replaced by 2025. As this 2017 deadline approaches it would be beneficial to have additional funds available for school districts struggling to meet state requirements to be able to reduce PM emissions with more cost effective retrofit technology. Many cash strapped districts do not have the funds to purchase replacement buses. Such a short and medium term retrofit strategy would lead to significant diesel emission reductions and cleaner air in and around school buses. This would greatly benefit our most sensitive population from the exposure to diesel exhaust emissions (school age children). While the allocation of these settlement funds unfortunately may not facilitate the timeline for Oregon's school bus program, numerous other states could have similar deadlines for school bus and public fleet programs where these funds could be utilized effectively.

We ask that the Court seriously consider our suggestions and strongly believe that these suggestions, if implemented, would help maximize existing and future air pollution improvement efforts to reduce NO_x and PM pollution. Our company stands ready to help the Court and the participating States achieve their health improvement goals.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Barge", written over a horizontal line.

Patrick Barge
Chief Executive Officer

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August 5, 2016

VIA EMAIL ONLY: pubcomment-ees.enrd@usdoj.gov

Assistant Attorney General
U.S. Department of Justice – ENRD
P.O. Box 7611
Washington, D.C. 20044-7611

Re: Proposed Partial Consent Decree Under the Clean Air Act
RE: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products
Liability Litigation, Case No: MDL No. 2672 CRB (JSC)
D.J. Ref. No. 90-5-2-1-11386

Dear Assistant Attorney General:

Please find enclosed comments and recommendations from EVgo Services LLC (“EVgo”) regarding Appendix C and C-1 of the proposed Partial Consent Decree in the Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products Litigation. As part of the Partial Consent Decree, Volkswagen has agreed to “invest \$2.0 billion over 10 years in zero emissions vehicle (ZEV) infrastructure, access and awareness initiatives,” including \$1.2 billion nationally and \$800 million in California. Our comments are limited to these sections of the Partial Consent Decree.

EVgo owns and operates the largest public high-speed charging network in metropolitan areas across the United States, with over 750 DC fast-charging stations. EVgo believes that providing a network of high-speed charging is the best way to increase range confidence and provide access to the benefits of electric vehicles to the most diverse set of consumers. As an owner operator, EVgo is committed to ensuring that drivers have reliable access to well-maintained and financially sustainable infrastructure. EVgo’s offerings include partnerships with automakers to provide promotional programs for their drivers, monthly subscription plans offered directly to drivers, as well as credit-card/walk-up payment methods to serve all members of the public. In addition, EVgo aims to support all plug-in ZEVs in the marketplace regardless of connector type. In the context of the Partial Consent Decree, EVgo offers the following comments:

1. The growing electric vehicle charging services industry includes many companies with multiple types of business models that have made significant investments in infrastructure (estimated at more than \$500 million to date) to serve current and future drivers. It is important that the settlement consider the competitive impacts on the existing service provider industry and include competitive opportunities for private sector partners to provide services, equipment and even ownership and operation of the infrastructure built in the program, as well as pricing and program options to drivers.



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2. Infrastructure built in the program should facilitate the greatest amount of petroleum offset. By focusing on public fast-charging infrastructure at 100kW levels and above, compared to typical outlets at less than 10kW, the infrastructure will serve 12 times as many drivers per dollar invested and three times the kWh¹. It will also begin to simulate the existing fueling infrastructure, which limits the cost of efforts toward behavior change for drivers and the futility of such behavior change. Utilities and building owners are already investing in lower-speed outlets and building codes now require them in many states across the country. Thus public high-speed charging would not duplicate existing investment, but would instead leverage the industry's development and increase access for residents of multi-unit dwellings across income levels, especially renters and those without dedicated on-site parking.
3. Infrastructure investments should be dedicated to electrical charging, not hydrogen refueling. The marketplace has made a clear decision that battery electric vehicles are the preferred technology. Dozens of automakers are already selling or have announced near term plans to build battery electric vehicles. Only one (Toyota) is actively marketing hydrogen. Providing hydrogen refueling would unfairly advantage that company. Furthermore, the production and delivery of hydrogen refueling stations is not inherently low pollution. Extensive conditions would need to be placed on the development of the infrastructure and ongoing enforcement of its fuel source would be required.
4. Educational/promotional spending should be highly limited, instead favoring durable investments for drivers and the broader public. Indeed, the pollution generated from driving the faulty vehicles is durable; so too should be the benefit from the decree. Further, it is very difficult to measure the impacts of promotional investments or to assure that they reach the appropriate audience with the appropriate message to benefit drivers. Leaving all these considerations to a review by oversight agencies over a ten year period simply asks too much for an engaged public and public sector. Durable infrastructure has clear and definable outcomes.
5. The demand charge component of operating costs - and demand mitigation measures such as energy storage - should be considered eligible expenditures. Currently, electricity costs are excluded (Section 2.2 of [Appendix C-1](#)); such restriction should be clarified to only apply to the variable charges for each kilowatt-hour delivered. A major portion of the operating costs for charging stations - especially high-powered stations - is the fixed "demand charge" that is included on the utility bill in most service areas. This demand charge makes it very expensive to operate charging equipment serving low volumes of electric vehicles, which will necessarily be the case for the next few years as production and EV adoption grow.
6. Reconsider/clarify the exclusion from "Creditable Costs" regarding joint efforts with other auto OEMs to create ZEV infrastructure ([Appendix C](#) paragraphs 1.4, 2.5.8 and 3.3.2.7). Certainly any expenditures should be incremental to and non-duplicative with other efforts, but it may be desirable to take advantage of economies of scale obtained from working with other partners on planning, coordination, and standardization. Where such efforts may reduce overall costs, there may be a benefit to permitting some allocation of such expenditures as Creditable Costs.



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A well-structured consent decree has the potential to be a durable legacy that future generations will point to as one of our generation’s most thoughtful actions on the path to a sustainable future. We hope you are able to receive these comments in the spirit of producing the best outcome for our state, country and our world.

Sincerely,

EVgo Services LLC

<u>Assumptions</u>	Typical Level 2	High Speed Site w/ 4 Chargers	Notes
Capital cost	\$7,000	\$400,000	
Expected sessions per day	1	200	Assumes utilization @ 50% for high speed
<i>sessions per week</i>	7	1400	(25/day on 50kW & 75/day on 150kW)
kWh per session	15	15	Assumes L2 fully charges battery every day
Total kWh per day	15	3000	
<i>per week</i>	105	21000	
Required DC sessions per resident per week		2	
<u>Conclusions</u>			
Total drivers served per install	1	700	
Capital cost per driver served	\$7,000	\$571	Investments in high speed serve over 12 times the number of drivers
Weekly kWh per dollar of capital	0.015	0.0525	Investments in high speed provide 3 times the total kWh
* Actual size/configuration/cost of high speed charging sites will vary, but this represents a reasonable typical expectation. The proposed amendment would provide flexibility to address the specific needs of sites and communities.			

JAMES B. FEINMAN
ATTORNEY AT LAW

JAMES B. FEINMAN, ATTORNEY

1003 CHURCH STREET, P.O. BOX 697
TELEPHONE (434) 846-7603

LYNCHBURG, VIRGINIA 24505
FAX (434) 846-0158

August 5, 2016

Via Email: pubcomment-ees.enrd@usdoj.gov
Assistant Attorney General
U.S. DOJ-ENRD
P.O. Box 7611
Washington, DC 20044

RE: *Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products
Liability Litigation*
Case No: MDL No. 2672 CRB (JSC)
Ref. No. 90-5-2-1-11386

To Whom It May Concern:

Please accept this letter as a public comment on the proposed Partial Consent Decree. The Partial Consent Decree cannot be entered because it violates Virginia's EPA-Approved State Implementation Plan, specifically, 9 VAC 5-40-5670 (A)(3) which provides:

"3. No motor vehicle or engine shall be operated with the motor vehicle pollution control system or device removed or otherwise rendered inoperable."

The Clean Air Act requires each State to create a State Implementation Plan (SIP) to attain the national primary and secondary ambient air standards. Within specified parameters, each State is free to establish its plan to attain the national standards. Each State must submit a SIP to the EPA for the EPA to determine if the proposed SIP meets the required parameters. When the EPA approves a State's SIP, the SIP gains the full force and effect of Federal law. See, Bayview Hunters v. MTC, 366 F. 3d 692, 695 (9th Cir. 2004); citing Friends of the Earth v. Carey, 535 F. 2d 165, 169 (2d Cir. 1976), cert. denied, 434 U.S. 902, 98 S. Ct. 296, 54 L.Ed. 2d 188 (1977). *"Approved SIPs are enforceable by either the State, the EPA, or via citizen suits brought under Section 304(a) of the CAA."* See, Bayview Hunters, id. See also, Baughman v. Bradford Coal Co., 592 F.2d 215, 217 (3d Cir. 1979); 42 U.S.C. §7604 (a).

Virginia's SIP regarding emission standards for mobile sources was approved by the EPA on April 21, 2000. See, 65 F.R. 21315. See also, 40 C.F.R. §52.2420.

9 VAC 5-40-5670 (A)(3) is clear, unambiguous, and enforceable:

"3. No motor vehicle or engine shall be operated with the motor vehicle pollution control system or device removed or otherwise rendered inoperable."

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Assistant Attorney General
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This regulation, which has the force and effect of Federal law and is enforceable as such, is vital to Virginia's efforts to meet the required national standards which, to date, have been ineffective. The Northern Virginia area consists of Alexandria, Arlington, Fairfax County, Falls Church, Loudon County, Manassas, and Prince William County. These are all non-attainment areas, and have been for many years. As you know, these areas border Washington, D.C. It is also where the greatest number of the approximately 10,000 Dirty Diesels in Virginia are located.

When the Dirty Diesel scandal became public, the EPA issued a press release on September 18, 2015, which stated, *inter alia*:

"Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

The EPA has on its website the following statement:

"EPA will not confiscate your vehicle or require you to stop driving."

See, <https://www.epa.gov/vw/frequent-questions-about-volkswagen-violations> accessed last on August 3, 2016.

Given the prohibition contained in 9 VAC 5-40-5670 (A)(3), the statements of the EPA are false and confusing, to say the least. Volkswagen immediately latched onto these incorrect statements and republished them over and over, including by letters sent directly to the 655 individual owners and lessees I currently represent. Volkswagen's CEO repeated the EPA's incorrect statement in his testimony under oath before Congress. The incorrect statement remains on Volkswagen's website today.

As you know, the proposed Class Settlement, which the Partial Consent Decree incorporates, does not require anyone to remove their vehicle from use. Owners and lessees have "options", including the option to do nothing. These options are allowable in many States, as their SIP does not provide that it is illegal to drive a vehicle with an inoperable emissions system. However, Virginia law, which has the full force of Federal law, is clear:

"3. No motor vehicle or engine shall be operated with the motor vehicle pollution control system or device removed or otherwise rendered inoperable."

The proposed Class Action Settlement, which is incorporated into the Partial Consent Decree settling the Clean Air Act Case, allows 15% of the Dirty Diesels to stay

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Assistant Attorney General
August 5, 2016
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on the road without penalty to Volkswagen. In Virginia, this would be approximately 1,500 Dirty Diesels. None of these may remain in use under 9 VAC 5-40-5670(A)(3), nonetheless 1,500. The proposed Class Action Settlement allows owners and lessees who are interested in a repair, which does not exist, to keep using their vehicles until June 2018 to determine if a repair becomes available. The vehicles cannot be operated in Virginia for the next two years while Volkswagen looks for a repair it has not discovered in the past two years. This would amount to four years of illegal use after Volkswagen's fraud was discovered. After June 2018, as stated before, the proposed settlement does not require an owner or lessee to take any action and they can keep their Dirty Diesel and drive it.

The Partial Consent Decree states Volkswagen is to be "*responsible for achieving and maintaining complete compliance with all applicable Federal, State, and local laws, regulations and permits; and settling Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein.*" See, Partial Consent Decree, ¶81, Docket #: 1605-1, pp. 44-45 of 225.

Accordingly, the proposed Class Action Settlement and the Partial Consent Decree in the EPA suit violate Federal and Virginia law because they do not enforce 9 VAC 5-40-5670(A)(3). See, Local 93, Int'l Ass'n of Firefighters v. City of Cleveland, 478 U.S. 501, 525-26, 106 S. Ct. 3063, 3077 (a Consent Decree should conform with and further the objectives of the law upon which the Complaint was based). Congress built principles of Federalism into the Clean Air Act by allowing the 50 States to choose their own State Implementation Plan techniques and emissions limitations to meet the National Standards. Certainly, Virginia's chosen and approved prohibition on the operation of vehicles with inoperable emissions systems should not be imposed on a State whose approved SIP does not contain such a prohibition. By the same token, the EPA, the Plaintiffs' Steering Committee, Volkswagen, and the San Francisco Court cannot act as a Super-Legislature and annul and repeal Virginia's chosen and approved SIP, and impose the other States' tolerance of inoperable emissions systems on Virginia.

While it is possible that Virginia's SIP has been overlooked, it seems more nefarious than that on Volkswagen's part (remember, this is a criminal enterprise). State Court suits currently pending in Fairfax County, Virginia Circuit Court, where Volkswagen's principal place of business is located, seek to enforce Virginia law by removing Dirty Diesels and their inoperable emissions systems from use, and to compensate the owners and lessees of these vehicles according to the recovery allowed under Virginia law. Volkswagen knew of these suits many months before the proposed settlement was announced. Virginia law allows a full refund of all money paid to Volkswagen, not a recovery based on the depreciated value as of September 2015, as authorized by the proposed Class Action Settlement. The proposed Class Action Settlement allows lessees no refund, while Virginia law allows them a full refund. Virginia law, in this case, allows no deduction for mileage while the proposed settlement

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Assistant Attorney General
August 5, 2016
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gives Volkswagen a large deduction for mileage. These are huge differences in the measures of recovery.

Additionally, Volkswagen has thrown up every possible roadblock to avoid judgment in the Virginia cases, all in the attempt to "cross the finish line" of September 16, 2016. As you know, on September 16, 2016, individual claims will be prohibited for anyone who has not affirmatively removed themselves from the Class. Many of these innocent consumers will not exclude themselves from the Class because the EPA has incorrectly told them the vehicles are legal. By the time they find out the vehicles cannot be driven in Virginia, the September 16, 2016 exclusion date will be gone, and they will not have a full remedy as they should under Virginia and Federal law. Due to the very short time frame, the Circuit Court of Fairfax County will not have completed removing the Dirty Diesels from use before September 16, 2016, and Volkswagen is doing everything it can to assure this. Virginia Courts will enforce 9 VAC 5-40-5670 (A)(3) as required by Virginia and Federal law, but the Class Action Settlement will have destroyed the remedy allowed by Virginia law. The Class Action Settlement and the Partial Consent Decree require Volkswagen to comply with all State laws, such as removing its defeat devices from the roads of Virginia, but then limits the remedy available to the innocent consumers. The proposed Class Action Settlement cannot require full compliance with Virginia law and then eliminate the remedy under Virginia law. Obviously the Class Action Settlement cannot annul and repeal Federal and Virginia law. Simply put, Virginia has the right and duty to enforce 9 VAC 5-40-5670 (A)(3). Given this right, the Federal Court in San Francisco, and the EPA, should not interfere with the remedy in any way.

It is important to note that the prior exclusive jurisdiction doctrine described in Kline, et al v. Burke Const. Co., 260 U.S. 226, 43 S.Ct. 79, 67 L.Ed. 226 (1922) and Palmer v. Texas, 212 U.S. 118, 29 Sup. Ct. 230, 53 L.Ed. 435 (1909), holds that if a court has in rem or quasi in rem jurisdiction over a thing, no other court may interfere by adjudication of any issue related thereto. The suits filed in Virginia Circuit Courts assert public nuisance actions and ask the Court to issue an order declaring the "Dirty Diesels" are illegal to operate in Virginia and must be removed from use. A nuisance action is a quasi in rem proceeding and must be brought in the State where the offending thing is located. See, Ricky Land and Cattle v. Miller and Lux, 152 F.11, 16 (1907). This case illustrates the need for and the wisdom of the prior exclusive jurisdiction rule. The EPA suit filed in January 2016 does not seek in rem or quasi in rem jurisdiction over the "Dirty Diesels". The Consolidated Consumer Class Action Complaint does not assert in rem or quasi in rem jurisdiction over Virginia "Dirty Diesels". The suits in Virginia Circuit Courts assert quasi in rem jurisdiction, and therefore are the first and only suits to do so. If the Partial Consent Decree with its incorporation of the proposed Class Action Settlement is allowed to impair the remedy available in Virginia before Virginia Courts finish adjudicating the removal of the "Dirty Diesels", the piecemeal adjudication will affect the quasi in rem adjudication of the offending defeat devices. This violates the long-standing prior exclusive jurisdiction doctrine which is settled law in the United States.

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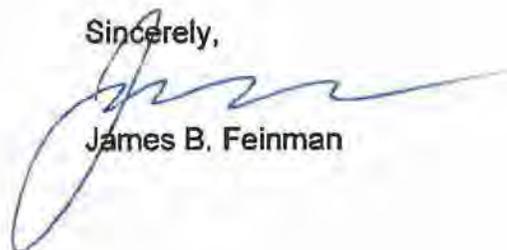
Assistant Attorney General
August 5, 2016
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The EPA suit filed in January 2016 does not attempt to enforce Virginia's SIP, and from the EPA's incorrect statements of law it is clear the EPA will not do so. The Consolidated Class Action Complaint does not seek to enforce Virginia's SIP. As allowed by Congress' express authority, Virginia citizens are enforcing Virginia's SIP, but the Partial Consent Decree and proposed Class Action Settlement interferes and impairs our ability to do so.

Most States do not prohibit the operation of motor vehicles with inoperable emissions systems. There is no reason to lose the whole settlement on appeal when it is so clear the Partial Consent Decree and the proposed Class Action Settlement violate the Clean Air Act and the Virginia law it incorporates by violating and refusing to enforce 9 VAC 5-40-5670 (A)(3).

Please call me at my office or on my cell phone, 434-941-7745, at any time on any day to discuss resolving this issue. I look forward to hearing from you. Thank you for your consideration.

Sincerely,



James B. Feinman

JBF/jnk

{2821 / 000}

July 26, 2016

John C. Cruden
Assistant Attorney General
U.S. Department of Justice
P.O. Box 7611
Washington DC 20044

RE: Proposed Partial Consent Decree - [U.S. v. Volkswagen Group of America, et al.](#)

Dear Assistant Attorney General Cruden and the Department of Justice, Environment and Natural Resources Division,

We appreciate the opportunity to provide comments on the Proposed Partial Consent Decree as part of [U.S. v. Volkswagen Group of America, et al.](#) First Priority GreenFleet strongly supports the effort to mitigate toxic NOx emissions and provide significant investment for zero-emission vehicle (ZEV) technology deployment, which will reduce greenhouse gas emissions and provide health and associated benefits throughout the United States.

First Priority GreenFleet is a total solutions provider of sustainable fleets, providing a full range of low- and zero-emission vehicles and infrastructure. First Priority GreenFleet is a division of First Priority Global, which is one of the largest and most reliable providers of specialty commercial fleet vehicles in the United States – with nearly 20 years of experience in the purpose built vehicle market with deployments throughout the US and in over 30 countries around the world. Our mission is to revolutionize the clean transportation industry with a customer-centric service network—continuing the legacy of First Priority’s success deploying and servicing specialty commercial fleets and now expanding our core expertise to bi-coastal manufacturing with an extensive service network.

First Priority GreenFleet is committed to deploying, servicing, and manufacturing low- and zero-emission medium- and heavy-duty vehicles. First Priority recently acquired the assets of Electric Vehicles International (EVI), and is very proud to expand manufacturing of EVI’s zero-emission medium-duty delivery trucks, as well as the suite of EVI vehicles, at the EVI facility in Stockton, California.

In addition, First Priority GreenFleet offers the first zero-emission, purpose-built school buses in North America – eLion (Type C) and Trans Tech/Motiv (Type A) that collectively cover the majority of school bus routes in California and beyond. First Priority is committed to serving school districts with clean, state-of-the-art school buses that eliminate toxic exposures and improve safety for students. School buses are the largest segment of mass transit in the United States and unfortunately are among the oldest and dirtiest fleets on the road. As children are the most sensitive receptors and face elevated health risks from exposures to toxic air contaminants from diesel emissions, they are disproportionately exposed to toxic air contaminants and associated health risks.

First Priority strongly supports the National Investment Plan, California ZEV Investment Plan, and the Environmental Mitigation Trust that provide the needed incentives to accelerate the deployment of zero-emission battery electric school buses, as well as medium-duty delivery trucks to help clean the air and benefit communities across the country. We specifically appreciate the inclusion zero-emission



battery-electric school bus replacement in the Environmental Mitigation Trust, as public school districts lack sufficient funding to replace their dirty-diesel buses and do not have adequate additional support from private or other public funding sources. Within the National Investment Plan, we applaud the emphasis to increase exposure and access to ZEVs, but we strongly encourage the inclusion of heavy-duty ZEV fueling infrastructure in order to accelerate the deployment of the cleanest vehicle technology in communities throughout the nation.

First Priority GreenFleet looks forward to continuing to work with stakeholders to identify projects that will replace older and dirtier heavy-duty diesel vehicles with advanced zero-emission technologies. We appreciate the opportunity to provide comments on the Proposed Partial Consent Decree. We strongly support the efforts to eliminate mobile pollutants, reduce greenhouse gas emissions, and benefit communities through the nation.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Alex'.

Alex Cherepakhov
CEO

From: Robert Lupacchino
To: ENRD, PUBCOMMENT-EES (ENRD)
Sent: 7/28/2016 8:33:01 PM
Subject: RE: Proposed Partial Consent Decree - U.S. v. Volkswagen Group of America, et al.



First Priority GreenFleet
1827 Army Court
Stockton, CA 95206
www.FPGreenFleet.com
Office: 209.938.6600
Fax: 209.938.6645

July 28, 2016

John C. Cruden
Assistant Attorney General
U.S. Department of Justice
P.O. Box 7611
Washington DC 20044

RE: Proposed Partial Consent Decree - U.S. v. Volkswagen Group of America, et al.

Dear Assistant Attorney General Cruden and the Department of Justice, Environment and Natural Resources Division,

We appreciate the opportunity to provide comments on the Proposed Partial Consent Decree as part of U.S. v. Volkswagen Group of America, et al. First Priority GreenFleet strongly supports the effort to mitigate toxic NOx emissions and provide significant investment for zero-emission vehicle (ZEV) technology deployment, which will reduce greenhouse gas emissions and provide health and associated benefits throughout the United States.

First Priority GreenFleet is a total solutions provider of sustainable fleets, providing a full range of low- and zero-emission vehicles and infrastructure. First Priority GreenFleet is a division of First Priority Global, which is one of the largest and most reliable providers of specialty commercial fleet vehicles in the United States – with over 15 years of experience in the purpose built vehicle market with deployments in 30 countries and 21 states. Our mission is to revolutionize the industry with a customer-centric service network—continuing the legacy of First Priority's success deploying and servicing specialty commercial fleets and now expanding our core expertise to bi-coastal manufacturing with an extensive service network.

First Priority GreenFleet is committed to deploying, servicing, and manufacturing low- and zero-emission medium- and heavy-duty vehicles. First Priority recently acquired the assets of Electric Vehicles International (EVI), and is very proud to expand manufacturing of EVI's zero-emission medium-duty delivery trucks, as well as the suite of EVI vehicles, at the EVI facility in Stockton, California.

In addition, First Priority GreenFleet offers the first zero-emission, purpose-built school buses in North America – eLion (Type C) and Trans Tech/Motiv (Type A) that collectively cover the majority of school bus in California and beyond. First Priority is committed to serving school districts with clean, state-of-the-art school buses that eliminate toxic exposures and improve safety for students. School buses are the largest segment of mass transit in the United States and, unfortunately, are among the oldest and dirtiest fleets on the road. School children are sensitive receptors and face elevated health risks from

exposures to toxic air contaminants from diesel emissions while riding and being near California's existing fleet of dirty diesel school bus, which disproportionately expose students to toxic air contaminants and associated health risks.

First Priority strongly supports the National Investment Plan, California ZEV Investment Plan, and the Environmental Mitigation Trust that provide the needed incentives to accelerate the deployment of zero-emission battery electric school buses, as well as medium-duty delivery trucks to help clean the air and benefit communities across the country. We specifically appreciate the inclusion zero-emission battery-electric school bus replacement in the Environmental Mitigation Trust, as public school districts lack sufficient funding to replace their dirty-diesel buses and do not have adequate additional support from private or other public funding sources. Within the National Investment Plan, we applaud the emphasis to increase exposure and access to ZEVs, but we strongly encourage the inclusion of heavy-duty ZEV fueling infrastructure in order to accelerate the deployment of the cleanest vehicle technology in communities throughout the nation.

First Priority Greenfleet looks forward to continuing to work with stakeholders to identify projects that will replace older and dirtier heavy-duty diesel vehicles with advanced zero-emission technologies. We appreciate the opportunity to provide comments on the Proposed Partial Consent Decree. We strongly support the efforts to eliminate mobile pollutants, reduce greenhouse gas emissions, and benefit communities through the nation.

Sincerely,

Robert Lupacchino

Robert Lupacchino
Chief Operating Officer

Robert Lupacchino
Office: 209.507.7530





FOUNDATION for CALIFORNIA
COMMUNITY COLLEGES

*Benefiting, Supporting, and Enhancing
the California Community Colleges*

1102 Q Street, Suite 4800
Sacramento, California 95811-6549
Toll-Free Telephone: 866.325.3222
Facsimile: 916.325.0844

www.foundationccc.org

July 22, 2016

John C. Cruden
Assistant Attorney General
U.S. Department of Justice
P.O. Box 7611
Washington DC 20044

RE: Proposed Partial Consent Decree - U.S. v. Volkswagen Group of America, et al.

Dear Assistant Attorney General Cruden,

We appreciate the opportunity to provide comments on the Proposed Partial Consent Decree as part of U.S. v. Volkswagen Group of America, et al. The Foundation for California Community Colleges strongly supports the significant investment for zero-emission vehicle (ZEV) and infrastructure deployment that provides the needed incentives to accelerate ZEV advancement to help eliminate toxic mobile emissions, reduce greenhouse gas emissions, and provide other health and associated benefits throughout the United States.

The Foundation for California Community Colleges (Foundation) is the statewide non-profit organization supporting the California Community College system, the largest system of higher education in the nation. The Foundation implements several environmental programs that directly benefits colleges, students, and communities, contributing to cleaner air while expanding student training opportunities for careers in the automotive repair field. These programs include the *California Automotive Resource Center* that provides resources to help automotive professionals advance their career and education; the *Smog Technician Training Program* and the *Small Engine Program* that deliver hands-on experience for students to become high performing smog technicians and small engine specialists; and the *Replace Your Ride* program to help low-income people trade in their older, high polluting vehicles for a more fuel-efficient option. The Foundation also previously administered VRRRM (Vehicle Repair, Retirement, and Replacement for Motorists), an incentive program designed to reduce the number of high emitting vehicles on the road, funded by \$20 million from the Unocal Reformulated Fuel Settlement. The Foundation, supporting all 113 colleges in communities throughout California, is poised to further our relationships to address air quality issues and position our students at the forefront of new environmental initiatives.

As part of the National Investment Plan, we strongly support the plan for significant investment in ZEV and infrastructure to accelerate the deployments of electric vehicles throughout the

United States. We applaud including eligibility for ZEV fueling infrastructure to incentivize public entities, employers, commercial property managers, and developers to install public EV charging infrastructure.

- Building on our strong experience facilitating the implementation of millions of dollars of funding to help clean the air and benefit communities throughout the state, the Foundation respectfully requests to be considered to be part of California's implementation statewide.
- We encourage leveraging the California Community Colleges as a partner in implementation. With over 2.1 million diverse students, the Community Colleges are California's largest provider of workforce training, particularly for technical and middle skills jobs. The system's 113 colleges, 72 districts, and over 80 million square feet of facilities are important community institutions throughout California, including in urban, rural and other underserved communities.
- We encourage incorporating student training programs to install and maintain the ZEV infrastructure to help provide hands-on experience to the next generation of automotive and other clean air technology professionals.

Thank you for the opportunity to provide comments on the Proposed Partial Consent Decree. We strongly support the efforts to provide incentives to further the deployment ZEVs and associated infrastructure in order to help improve air quality, provide health benefits, and facilitate advanced vehicle technology training and job growth in communities throughout the United States.

Sincerely,

A handwritten signature in black ink that reads "Keetha Mills". The signature is written in a cursive, flowing style.

Keetha Mills,
President and Chief Executive Officer

From: CWILLIS@gaports.com
To: ENRD, PUBCOMMENT-EES (ENRD)
Sent: 7/29/2016 4:19:10 PM
Subject: Volkswagen ``Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386.
Attachments: Case 3-15-md-02672-CRB Document 1605-1, Appendix D-2, Mitigation.pdf; GPA Clean Air Excellence Award - Clean Air Tech.pdf

To Whom It May Concern,

The Georgia Ports Authority (GPA) is an entity of the State of Georgia. The GPA container port is the fourth busiest container port and single largest sized container terminal in the United States. Ports have been a priority of the EPA over the last several years and the GPA has been fortunate to have received six EPA DERA grants over the last eight years. Sometimes there can be some very unique circumstances with port equipment and does not always "fit the mold" of mass produced equipment such as the heavy-duty over-the-road trucks.

Two expansions are suggested to the **APPENDIX D-2, ELIGIBLE MITIGATION ACTIONS AND MITIGATION ACTION EXPENDITURES.**

The first would be to include projects currently eligible for EPA DERA grants; not just the cost share.

GPA has been awarded and administered three grants for the **Drayage Truck Rebate Program** and would like to continue this program. Since ports usually do not contract with dray trucks, it is hard to effect changes in this older truck fleet but the foregoing program has been a very successful model to effect change. This program replaces 1993 -2006 vintage dray trucks (owner / operators) with 2011 or newer trucks that make a minimum of 150 annual GPA terminal trips through a Financing Vendor.

Rebates are for 50% of the truck cost with a maximum of a \$30,000 rebate and the service commitment of 150 annual trips is monitored by the GPA for program compliance. At the end of the day, the owner / operators own the truck after all payments (of the remaining balance after the rebate and old truck scrappage program income) are made to the Financing Vendor who typically has much lower interest rates for the most economically challenged trucking group who usually drive the oldest trucks.

The second requested change is to allow engine conversions that reduce diesel emissions by 90% or more and not require the diesel engine destroyed along with changing the definition under forklifts. The GPA has the first eRTGs or electric rubber tired gantry cranes in North America with four of twelve phases complete. This project has just received EPA's national 2016 **Clean Air Excellence Award - Clean Air Technology** (see below for additional information on this project) for this new technology that began with the pilot program in 2012. The eRTGs and RTGs lift 40 and 20 foot cargo containers in the container port terminal to load / unload the cargo containers from over-the-road trucks; hence changing the forklift definition as these units are much larger and more efficient at moving cargo having spreader bars instead of forks. The GPA has 45 eRTGs and plans to convert the balance of the existing fleet or 101 RTGs to eRTGs. The other issue is that these units have diesel engines that only start up to move from one stack of containers to another with a 95% reduction in diesel fuel use as well as the associated emissions. These diesel engines also serve as a resiliency / redundancy measure as promulgated and supported by FEMA / DHS (Federal Emergency Management Agency / Department of Homeland Security). In case of power failures or a hurricane, these units can continue to operate the fourth largest container port to supply goods to the hinterlands. The infrastructure, including the electric bus bars, to power these units should also be included as allowable expenditures. Repowering these units sooner would save tons of emissions years earlier than one phase per year, therefore, helping to mitigate the excess emissions from the VW vehicles.

Reading the below **Clean Air Technology** Award information clearly shows the economic advantage of using the electric power versus diesel engines. The GPA prefers to use the more cost-effective, cleaner,

and reliable electric power than the diesel engines. More information is available on this new technology if requested.

The relevant sections of **APPENDIX D-2, ELIGIBLE MITIGATION ACTIONS AND MITIGATION ACTION EXPENDITURES** are attached below for ease of review.

Thank you for your consideration of the above changes. Please do not hesitate to call or correspond for any additional needed information.

P Think green! Please leave it on the screen.



Cathy Willis
Grants Manager

Phone 912.964.3800 | Fax 912.966.3611
email: cwillis@gaports.com | www.gaports.com

PHYSICAL ADDRESS:
Georgia Ports Authority | 2 Main St. | Garden City, GA 31408

MAILING ADDRESS:
Georgia Ports Authority | P.O. Box 2406 | Savannah, GA 31402



KATE BROWN
Governor

August 5, 2016

Assistant Attorney General
U.S. Department of Justice
Environmental and Natural Resources Division
P.O. Box 7611
Washington, D.C. 20044-7611

And by email to: pubcomment-ees.enrd@usdoj.gov

In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation,
Case No: MDL No. 2672 CRB (JSC), and D.J. Red. No. 90-5-2-1-11386

Dear Assistant Attorney General:

The State of Oregon is pleased that a timely and productive resolution is in hand to address the past and future environmental impacts that have and will result from the use of emission control defeat devices in select diesel powered cars marketed under the Volkswagen (VW) and Audi brands. It is disturbing that Oregonians unknowingly purchased thousands of these vehicles in the belief such vehicles, as marketed, offered low emissions and high gas mileage. Instead, these vehicles exposed their owners and thousands of Oregonians to illegal levels of harmful diesel emissions and attendant respiratory, cardiac, and cancer diseases.

I have consulted with the Oregon Department of Justice and Oregon Department of Environmental Quality in preparing these comments addressing the Environmental Mitigation Fund proposed by the Partial Consent Decree issued for the above-referenced case. We see the Environmental Mitigation Fund as a positive step toward rectifying the harm inflicted by the illegally polluting vehicles and advancing our goal of ensuring healthy air for Oregonians. This is particularly important for communities likely to be most impacted by harmful diesel emissions, including children, seniors, communities of color, and people with low incomes.

254 STATE CAPITOL, SALEM OR 97301-4047 (503) 378-3111 FAX (503) 378-8970
WWW.GOVERNOR.OREGON.GOV



VW-2LCMT0000375

Assistant Attorney General
August 5, 2016
Page 2

Oregon has the highest per capita ownership of the vehicles with defeat devices in the United States, which highlights how Oregonians responded positively and in significant numbers to the “clean diesel car” claims asserted by Volkswagen. We believe the significant public health and environmental impact to Oregonians can be addressed by the plan outlined in the proposed Consent Decree. In particular, we support the goals of the proposed Appendix D Mitigation Trust Agreement to mitigate the impacts of excess emissions from the subject vehicles by focusing on reducing NOx emissions from vehicle engines. We are gratified the U.S. Department of Justice acknowledged the particular responsibility and expertise of states in addressing this issue and the significant role assigned to them in the proposed Consent Decree.

We support the intention behind the Environmental Mitigation Fund as a means to address lifetime emissions from the subject vehicles. This Fund will provide multiple opportunities to identify and support mitigation actions throughout Oregon. We support the concept of requiring VW to place additional funds into the trust if the goal to recall or remove defeat device-equipped vehicles from service is not met. This serves as both an incentive for VW to successfully implement the recall program, and will ensure funds are available to reduce excess emissions, the express goal of the Fund.

Emissions from diesel engines have long been a concern in Oregon, and for the past 15 years, we have partnered with the Environmental Protection Agency (EPA) and others to direct millions of dollars to support cost-effective diesel pollution mitigation projects. Based on that experience, the following suggestions are offered for your consideration, which we believe will help ensure that the proposed mitigation trust will quickly and effectively achieve its intended goals:

Clarify that diesel engines are the target

Several project categories are outlined for acceptable mitigation actions, e.g., heavy duty trucks and buses, all of which are predominately, but not exclusively, powered by diesel engines. Some engines in these categories may be powered by gasoline or alternative fuels, like propane. The descriptions of the proposed categories eligible for mitigation funding do not explicitly state that the engines that are to be repowered or replaced are diesel engines. We recommend that you clarify that diesel engines are the primary target.

Establish engine model year as the marker for eligibility

In medium and heavy duty vehicles, the model year of the chassis, on which registration is based, may not be the same as the model year of the engine. The benefits from the Environmental Mitigation Fund will be maximized from actions targeted towards specific engine model years, not vehicle chassis registration years. We suggest specifying the engine model year in the definition section.

Assistant Attorney General
August 5, 2016
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Explicitly require that the old engines be scrapped in repower projects

It is implied, but not stated, that in repower projects the older engine is scrapped. As in replacement projects, the air quality benefit is secured by the installation of a newer, lower emitting engine and the destruction of the older, higher emitting engine. We recommend clarifying that the older engine must be scrapped in a repower project.

Allow 2010 and newer model-year engines as “new” diesel

Repowering to new diesel engines or replacing with “new” vehicles represents the majority of eligible actions. The federal emission standard for NOx from heavy duty on-road diesel engines has remained unchanged since the 2010 engine model year. Making only the latest model year eligible for replacement also means the costs of a “new” replacement vehicle will be higher than a used but 2010 and newer model-year engine that offers equivalent emission benefits but at a lower cost. The differential between these two acquisition costs is a barrier to participation by low-margin fleet owners. In Oregon, many of the oldest and highest polluting vehicles are owned by individual operators and small fleets for which the capital investment needed, even with mitigation fund assistance, may prevent participation when forced to purchase the latest model year vehicles. We recommend that eligible vehicles include any diesel engine with a model year subsequent to the adoption of the currently applicable emission standard.

Clarify the definition of trucks and truck tractors to include straight trucks

The definition of eligible “large trucks” may be unintentionally too restrictive, as it limits projects to those involving truck-tractors. This definition excludes so-called “straight trucks,” also to be found in this weight classification, that carry cargo within a body mounted on a chassis. Clarifying that all forms of trucks in these weight categories are eligible increases the opportunity to reduce emissions from, for instance, delivery trucks that can contribute to desired pollution mitigation, especially in urban areas.

Allow alternatives for demonstrating vendors are paid market rates for services

We appreciate the desire to make as effective and judicious use of these funds as any revenue secured by public taxation. However, requiring certification that “all vendors were or will be selected in accordance with applicable state public contracting laws” may result in a burden that effectively discourages small business owners of older heavy duty diesel engines from participating. Contracting laws are intended to foster competition and judicious use of public funds but do require heightened commitment and diligence to ensure compliance throughout the process. The State of Oregon considers targeting funding to small and disadvantaged business owners complementary to the stated goal to reduce emission impacts to disadvantaged communities. The current requirement that every potential recipient of trust funding purchase its services from a vendor selected in compliance with state procurement requirements could prove a significant barrier to participation.

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Small truck owners, for example, may be able to purchase a new truck from dozens of different truck dealers. So long as the state can demonstrate that a purchase is within the normal market range for the truck purchased, we recommend relieving the truck buyer from having to go through its own separate public contracting procurement process.

As an example, we note the EPA pioneered a rebate program that established sufficient controls which could serve as a model for disbursing these funds. This is particularly true for small businesses that may not have the resources or commitment to learn, understand, and comply with public contracting laws. We encourage inclusion of a rebate option as a means to address concerns about judicious use of funds.

Explicitly state that a repowered engine must achieve a 25% emission reduction

If the expectation is that successful mitigation projects relying on repowering will result in engines meeting 2010 federal emission standards, then that should be stated explicitly. Achieving the 2010 emission standard for highway vehicles requires exhaust after-treatment and not just an engine change. The definition of repower, an engine that meets “a more stringent set of [EPA or California Air Resources Board] emission standards” lacks specificity, suggesting an opportunity for modest reductions to qualify when the parties may have envisioned greater gains. Establishing a more explicit benchmark, e.g., a 25% reduction or an advance by non-road engine tier, would be preferable.

Expand Ocean Going Vessel idle reduction options

The majority of vessels that call on Oregon ports are bulk/breakbulk ships. The large worldwide inventory of these ships and the predominance of single ship visits makes shorepower provisions very expensive in Oregon and similar jurisdictions. To the extent this is the case in other ports around the country, we believe it would be better to broaden the category to include at-berth technologies proven to reduce emissions that can be implemented at potentially lower costs. The provisions of the consent decree regarding shorepower currently require expensive infrastructure investments to vessels that are not cost-effective for bulk/breakbulk ships, in addition to shoreside infrastructure.

Clarify that the percentage payment limits for eligible projects are “up to” limits

The proposed decree does not clearly state whether states may provide payments for eligible projects at percentages lower than those specified in the proposed decree. Funds are leveraged to the greatest extent if states may provide payments at lower levels, such as by considering an applicant’s financial status when determining the percentage payment that will be available. We recommend the final decree clarify that the authorized payment percentages are the maximum allowed payments, but that at their discretion states may pay at lower percentages based on other relevant factors.

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Increase the percentage that may be spent on administrative costs

We request the decree be modified to allow administrative costs up to 15%, as provided under EPA's DERA program. Successful implementation of this program will require substantial effort to identify, recruit, manage and audit projects. Our intention is to focus funding on direct project activity but do not want to preclude the ability to provide timely and due diligence in meeting the goals of the Consent Decree.

Allow beneficiaries to draw funds in advance for program development and administration

Before the first project is committed, significant effort will be required to set up financial controls, develop funding protocols and accountability mechanisms, conduct extensive outreach, develop communication tools and websites, and other necessary actions to implement a cost effective program. We therefore strongly recommend, in the interest of ensuring effective and accountable investment of environmental mitigation funds, that a certified jurisdiction be permitted to draw up to one percent of its allocation for administrative expenses in advance of a beneficiary's first program funding request. Such a request could still be conditioned on no more than 15% of overall funds (as we have proposed) going to administrative expenses. It could also be triggered only upon the state's provision of its initial program plan to the trustee, as required to be submitted under the proposed decree.

Oregon has implemented the state's statutory Clean Diesel Initiative since 2001, a broad-based effort to educate diesel engine users on the need and opportunities to reduce emissions from existing diesel engines. Through our efforts to date, we have been successful in recruiting and supporting engine owners in rail, marine, truck, bus, and non-road equipment categories to undertake a variety of repowering, exhaust retrofitting, and vehicle replacement projects that deliver cost effective improvements in air quality. Building on our existing diesel reduction programs and commitments, we expect not only to meet but to exceed the minimum conditions outlined in the proposed Consent Decree as we move forward to select Oregon priority projects under terms that achieve significant strides in reducing harmful diesel emissions. We hope our comments are instructive and useful to the parties and the court in ensuring that the proposed trust will achieve the desired outcomes.

Thank you again for the opportunity to comment on and participate in this program.

Sincerely,



Governor Kate Brown

KB:GG:DF



August 3, 2016

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Assistant Attorney General,
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Re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2- 1-11386

Dear Assistant Attorney General Cruden:

Greater Washington Region Clean Cities Coalition (GWRCCC) appreciates the opportunity to provide public comments on the draft partial settlement between the U.S. government and Volkswagen (VW) published on July 6 2016. GWRCCC is a local non-profit organization, serving the Metropolitan Washington, DC region, which conducts outreach and education to promote alternative clean transportation fuels and vehicles that provide greater energy security and a cleaner environment for the United States. We are one of the grassroots Clean Cities coalitions that participate in the U.S. Department of Energy's (DOE) Clean Cities program.

We respectfully urge the parties to amend the Consent Decree and include an explicit incentive for "Near-Zero" heavy-duty natural gas engine technologies as a part of any settlement to this matter. In terms of reducing harmful nitrogen oxide (NOx) emissions, these engines are 90 percent cleaner than what is required by current federal standards. Compared to a new diesel truck, each new truck that operates with a "Near-Zero" engine will displace or offset almost one ton of NOx over its lifetime. Additionally, the "Near-Zero" natural gas engines are currently available from Cummins-Westport that will be powering refuse, transit and other heavy-duty applications this year. Expanded product offerings from Cummins-Westport and potentially other manufacturers will put this clean technology in long-haul trucks, school buses and other vehicles in the coming months.

With the abundance of natural gas resources in our country, a major step forward to increasing its use would be to amend the Consent Decree to provide an additional incentive of up to 80 percent for non-governmental entities that purchase "Near-Zero" natural gas trucks and also to include funding for natural gas infrastructure. Given the right type of incentives, our medium and heavy duty fleets owners, managers, and policy makers would not hesitate to move to procure cleaner-burning equipment that reduces harmful nitrogen oxide and greenhouse gases.

Thank you for your consideration and the opportunity to provide these comments.

Regards,

Ronald S. Flowers, Executive Director
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July 21, 2016

John C. Cruden
Assistant Attorney General
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RE: Proposed Partial Consent Decree - [U.S. v. Volkswagen Group of America, et al.](#)

Dear Assistant Attorney General Cruden,

We appreciate the opportunity to provide comments on the Proposed Partial Consent Decree as part of [U.S. v. Volkswagen Group of America, et al.](#) Green Commuter strongly supports the significant investment for zero-emission vehicle (ZEV) technology deployment that provides the needed incentives to accelerate ZEV advancement to help eliminate toxic emissions, reduce greenhouse gas emissions, and provide other health and associated benefits throughout the United States.

Green Commuter, a minority-woman-owned small business and Benefit Corporation, has developed an innovative system that utilizes a fleet of 100% ZEVs to provide a combined service of vanpool, car sharing, and/or fleet replacement to maximize efficiency and decrease the cost of commuting. The model utilizes vanpool vehicles as public car share vehicles and/or fleet replacement vehicles during non-commute hours. This integrated, efficient approach reduces costs and increases benefits—including improving zero-emission mobility, reducing emissions, and alleviating traffic.

As part of the National Investment Plan, we strongly support the inclusion of zero-emission car sharing services as an eligible investment. Zero-emission vanpooling, with combined zero-emission car sharing or zero-emission fleet replacement, is ready for immediate scaling and investments now will provide a strong spark to accelerate the deployment of ZEVs, and offer the opportunity for communities throughout the country to drive and ride an electric vehicle. Being part of the National Investment Plan will provide lessons learned that educate companies, government agencies and commuters of the economic, environmental, and health benefits of zero-emission commuting.

We applaud including eligibility for ZEV fueling infrastructure to incentivize employers, commercial property managers, public entities, and developers to install public EV charging infrastructure. Reliable and comprehensive fueling infrastructure is critically needed in order to further accelerate the adoption of zero-emission vehicles throughout the United States.

Thank you again for the opportunity to provide comments on the Proposed Partial Consent Decree. We strongly support the efforts to reduce mobile source criteria pollutants, toxics and greenhouse gas emissions in order to help improve air quality in communities throughout the United States.

Sincerely,



Gustavo Occhiuzzo
CEO

From: Lambert, Kathleen Fallon
To: ENRD, PUBCOMMENT-EES (ENRD)
CC: Templer, Pamela
Sent: 8/5/2016 5:49:49 PM
Subject: Comments on Volkswagen Partial Consent Decree; 81 FR 44051; Page: 44051 -44052; Document Number: 2016-15858
Attachments: Lambert and Templer comments.pdf

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August 5, 2016

In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386.

The following comments are in response to the federal register notice of a partial consent decree related to Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386.

We recommend that the Department of Justice revise the partial consent decree to include forest protection in the U.S. as an eligible mitigation action in Appendix D-2 "Eligible Mitigation Actions and Mitigation Action Expenditures" and to allow the expenditure of up to \$700 million in funds for that use. The use of funds to protect the green infrastructure of forests and trees that remove nitrogen oxides and tropospheric ozone from the atmosphere is consistent with the stated purpose of the mitigation fund. Moreover, for rural areas and tribes that have been affected and should receive compensation but may lack sufficient point or mobile sources to use their legal share of funds, forest protection provides a technical sound option that provides substantial public benefits. We provide the attached technical analysis to support this recommendation.

Sincerely submitted,
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August 5, 2016

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The United States Environmental Protection Agency (USEPA) issued two Notices of Violation in 2015 to Volkswagen (VW) for selling vehicles in the US that exceeded federal standards for tailpipe nitrogen oxide (NO_x) emissions (1, 2). The USEPA allows for mitigation actions in enforcement cases involving emissions violations to “remedy, reduce or offset past (and in some cases ongoing) harm caused by the alleged violations in a particular case. . . . such harm is generally found where excess emissions or discharges harmed human health, wildlife or the environment” (3). This study demonstrates the amount of forestland and associated financial costs required to offset, or mitigate, past excess NO_x emissions from VW automobiles sold in the U.S.

NO_x is a pollutant regulated by the USEPA largely due to its role in the formation of acid deposition and as a precursor to tropospheric, ground-level, ozone (O₃). Ground-level O₃ is a secondary pollutant formed by a chemical reaction between NO_x and volatile organic compounds (VOCs) in the presence of sunlight. It is a short-lived greenhouse gas relative to carbon dioxide, nitrous oxide and methane, but currently accounts for 22% of global warming attributed to human activities (4). Ground-level O₃ is also a photo-oxidant that harms people when it occurs at elevated levels in the atmosphere by causing damage to lungs and exacerbating chronic respiratory diseases such as asthma (5-7). High ground-level ozone also damages plants by diffusing through stomata on leaf surfaces and degrading plant chlorophyll, leading to reductions in natural ecosystem and agricultural productivity (8).

Nitrogen dioxide (the most common form of NO_x in the U.S.) and ground-level O₃ are two of six pollutants identified as criteria pollutants (i.e., common pollutants) under the U.S. Clean Air Act based on established human health criteria. Air quality standards in the US are set for criteria pollutants under the National Ambient Air Quality Standards (NAAQS). In 2015, the O₃ standard was lowered from 75 to 70 parts per billion (ppb) calculated using the annual fourth-highest daily maximum eight-hour average concentration, averaged over three consecutive years (9). As of June 2016, USEPA estimates that two hundred sixteen U.S. counties with approximately 121.7 million residents, or 40 % of the U.S. population, exceeded National Ambient Air Quality Standards for O₃, due in part to vehicle emissions (10).

Forests can serve as a natural air filter by removing NO_x, O₃, and other pollutants from the atmosphere via gas exchange through plant stomata (11). Previous chamber, field, and modeling studies measured the rate of pollutant removal for a variety of tree species under a range of environmental conditions and evaluated the extent to which forest protection programs could help attain ambient O₃ concentration standards in areas that are in exceedance of allowable thresholds (12-14). Model studies estimate that trees and forests in U.S. forests remove approximately 17.4 million metric tons of air pollutants each year with annual health benefits of \$6.86 billion USD (15).

Several studies have estimated the rate and amount of pollution removal by forests at county to national scales. Total removal is estimated as the annual flux (pollutant removal) value ($\mu\text{g m}^{-2} \text{yr}^{-1}$) multiplied by tree cover (m^2) and flux is estimated as:

$$F = V_a \times C$$

Where V_d is the deposition velocity to the leaf surface (m h^{-1}) and C is the pollutant concentration ($\mu\text{g m}^{-3}$). Values for deposition velocity are typically calculated using local hourly meteorological data from the U.S. National Climatic Center and pollutant-specific deposition velocities (16, 17). Pollutant concentrations are generally taken from hourly data from the nearest air quality monitors in the USEPA's Air Quality System national database. Tree cover estimates are available from the U.S. National Land Cover Database and related products (18). Using this approach, modeling studies have reported total annual O_3 removal values for trees by county for the U.S. of 2.1 kg ha^{-1} for urban land in North Dakota to 50 kg ha^{-1} for rural lands in New Hampshire (19). The range in removal is driven primarily by the amount of tree cover, percent coniferous cover, ambient O_3 concentrations, and local meteorological conditions that affect deposition rates, such as temperatures and wind speed.

Other studies have evaluated the cost-effectiveness of tree retention, forest conservation, and reforestation projects to improve air quality (20-22). For example, one study found that peri-urban reforestation project could contribute to compliance for a ground-level O_3 nonattainment area in Texas but that the cost of land limited the use of this abatement strategy given less expensive pollution control technology (23). Another limitation of this particular abatement application is the need for precise pollution removal performance under variable conditions in order to comply with ambient air quality standard protected by law. Here we explore the use of forest conservation projects for a more flexible application than attainment of air quality standards --specifically, funding for actions to mitigate excess emissions and associated air quality impacts that occurred in the past.

Approximately 482,000 two-liter cars and 85,000 three-liter VW cars were sold in the U.S. between 2009 and 2015 with estimated tailpipe emissions above the federal NO_x emission standards of 0.043 grams per kilometer (0.07 grams per mile, gpm) (24, 25). On-road testing results show that the 2.0-liter cars emitted 15 to 35 times more NO_x than the emissions limit and the 3.0-liter cars emitted NO_x at a rate of five to 20 times the emissions limit (26). Based on estimated year-over-year increases in sales from 2009 to 2014 and an average of 19,312 kilometers driven per car per year, the cars logged approximately 30.3 billion kilometers during that time (27). Using these emission and mileage estimates, the non-compliant cars in the U.S. emitted approximately 33,770 metric tons of excess NO_x between 2009 and 2015.

The amount of air pollution removed by forest canopies depends on the leaf area of the forest canopy, ambient air pollution concentrations, and weather (28). NO_x emissions are regulated by the USEPA for their effects on ground-level O_3 formation, therefore we calculated the area of forest needed to remove 33,770 metric tons of NO_x directly, as well as the equivalent amount of NO_x attributable to O_3 removal by trees (hereafter referred to as NO_x -equivalent). Given that the area calculation for compensatory mitigation is not spatially explicit, we used published values for the estimated removal of NO_x and NO_x -equivalents due to trees for the conterminous U.S. (29). For this analysis, forest protection for mitigation is assumed to occur in areas of the U.S. where ground-level ozone formation is known to be NO_x -limited (30).

Given a NO_x removal rate for forests of the conterminous U.S. of 0.55 grams of NO_x per square meter per year, one hectare of forest can remove approximately 0.0264 metric tons of NO_x and NO_x -equivalent per year (31). Under these assumptions, the estimated amount of protected U.S.

forestland needed to ensure the uptake of 33,770 metric tons ranges from 127,918 hectares in 10 years to 63,959 hectares in 20 years and 42,639 hectares in 30 years (32).

The cost to purchase or place a conservation easement on a hectare of forestland in the U.S. ranges widely due to the variability in real estate values and forest conditions such value of standing timber. For the purpose of this calculation we use a national average of \$4942 (USD) per hectare for fee acquisition from Kroeger et al. 2014 and half that value (\$2471 USD per hectare) for a conservation easement. In addition to the direct costs of land protection, there are real estate transaction and stewardship costs. We use a value for administrative costs of 10% consistent with the allowable expenditures in a draft partial consent decree by the U.S. Department of Justice for the VW case (33). This brings the per-acre cost of forest mitigation to \$5436 USD (acquisition) and \$2718 USD (easement) per hectare.

This analysis shows that total funding needs for a compensatory mitigation forest protection program to offset the excess NO_x emitted from Volkswagen automobiles ranges from \$115 to \$347 million USD for easements to \$231 to \$695 million USD for acquisition, depending on period of time used for achieving the NO_x removal target and the associated hectares of land required. In addition to the direct benefits of NO_x and NO_x-equivalent removal, forest protection provides additional supplemental ecosystem services, or co-benefits, to the public including carbon sequestration and storage, water purification and storm water retention, recreation, and habitat supporting biological diversity (34).

The purpose of mitigation is to provide redress for harm caused by emission violations to degrade air quality and harm human and environmental health. This analysis shows that the protection of forests offers a robust compensation measure for emissions violations that not only preserves air quality benefits, but also ensures human health, ongoing carbon storage, wildlife habitat, and outdoor recreational opportunities for the American public. The findings demonstrate that a mechanistic understanding of key ecological functions of forests developed through decades of research can be used to establish forest protection as an eligible mitigation action and to estimate mitigation payments for ecosystem services associated with violations of environmental regulations in the U.S. and around the globe.

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Supplementary Materials

Methods

Excess Emissions Estimation

To estimate the excess emissions from Volkswagen vehicles sold in the U.S. we consulted the two U.S. EPA Notices of Violations to determine the number of vehicles affected. Next, we used assumed that sales in the vehicles increased from one year to the next and used a table from K. Drum showing a potential sales profile to allocate the total number of vehicles across each year from 2009 to 2015 for each notice of violation (see Tables S1 and S2).

The excess emissions for the vehicles varied for each violation. In the first violation, on-road testing found these vehicles exceeded the U.S. EPA standard by 10 to 40 times. We used an average value of 30 times the limit. The Tier 2 Bin 5 NO_x emission limit is 0.07 grams per mile (gpm) and the excess emissions for this violation are then estimated to be 2.03 gpm (30*0.07 gpm - 0.07 gpm).

In the second violation, on-road tests estimated emissions exceedances of up to 9 times the U.S. EPA limit with an average of 6 times higher. For those vehicles excess emissions equal 0.35 grams per mile (6*0.07 gpm - 0.07 gpm).

By multiplying the estimated miles driven by the excess emissions by vehicle type, we calculate that the excess emissions from the subject Volkswagen vehicles sold in the U.S to be 33,770 metric tons.

Pollution Removal Estimation

To estimate the area of forest protection needed to remove an amount of NO_x from the atmosphere equivalent to that emitted from out-of-compliance VW vehicles, we first selected air pollution removal rates from the literature for NO₂ and O₃. Several NO₂ and O₃ removal rates from the literature are presented in table S3. We selected the value for the conterminous US (which are the same as for rural area) because the forest area protected through compensatory mitigation is more likely to be in rural areas (where land is more available and land values are lower) than in urban areas.

Next, we converted annual O₃ removal to its NO_x equivalent. To convert annual O₃ removal by forests to NO_x-equivalent we assumed a O₃ production efficiency of NO_x of 5 (one mol NO_x (NO₂ + NO) produce 5 mol O₃); reported range in literature is 3.0 to 8.0 and used the calculations below. We further stipulate that the forest protection would occur in regions where O₃ formation is NO₂-limited.

Step 1: 5.49 g O₃ m⁻² divided by 48 g = 0.114 mol O₃ m⁻²

Step 2: 0.114 mol O₃ m⁻² divided by 5 = 0.0228 mol NO_x m⁻²

Step 3: 0.0228 mol NO_x * (76 g NO_x/mol NO_x) = 1.73 g NO_x m⁻²

Then, we added the direct annual NO₂ removal and the NO_x equivalent removed via ozone removal to estimate total NO_x removal shown in the calculations below. We used the value for NO₂ removal from Nowak et al. (2014) table 5 for the conterminous U.S., plus the value from the calculations above for NO₂-equivalent removal associated with O₃ removal. We assumed a 1:1 molar ratio in the atmosphere of NO:NO₂ for NO_x.

Step 1: $0.55 \text{ g NO}_2/\text{m}^2 * (\text{mol NO}_2/46 \text{ g NO}_2) * (1 \text{ mol NO}_x/1 \text{ mol NO}_2) * (76 \text{ g NO}_x/\text{mol NO}_x) = 0.909 \text{ g NO}_x/\text{m}^2$

Step 2: $0.909 \text{ g NO}_x/\text{m}^2 + 1.73 \text{ g NO}_x/\text{m}^2 = 2.64 \text{ g total NO}_x/\text{m}^2 \text{ removed}$

Finally, we converted the annual NO_x removal rates from g m⁻² to short tons per acre using the unit conversion factor of 0.01 as follows:

$2.64 \text{ g m}^{-2} \text{ total NO}_x * 0.01 = 0.0264 \text{ metric tons per hectare.}$

Forest Protection Area and Cost Estimation

In the final step in the analysis, we estimated the amount of land that would be needed to remove an equivalent amount of NO_x as emitted by the violating vehicles in 10 year, 20 year, and 30 years, along with the associated cost.

Here we multiplied the NO_x removal rate of 0.0264 metric tons per hectare by each “payback” period to determine the total expected NO_x removal per hectare, as below:

$0.0264 \text{ t NO}_x/\text{ha}/\text{yr} * 10 \text{ yrs} = 0.264 \text{ t/ha}$

$0.0264 \text{ t NO}_x/\text{ha}/\text{yr} * 20 \text{ yrs} = 0.528 \text{ t/ha}$

$0.0264 \text{ t NO}_x/\text{ha}/\text{yr} * 30 \text{ yrs} = 0.792 \text{ t/ha}$

Next, we divided the total excess emissions by the removal rate per hectare for each payback period to determine the forest area needed to removal the total excess NO_x of 33,770 metric tons.

$33,770 \text{ t} / 0.264 \text{ t/ha} = 127,918 \text{ ha}$

$33,770 \text{ t} / 0.528 \text{ t/ha} = 63,959 \text{ ha}$

$33,770 \text{ t} / 0.792 \text{ t/ha} = 42,639 \text{ ha}$

Table S1.

Estimated miles drive for Volkswagen Notice of Violation 1

Year	Lifetime miles driven per vehicle	Vehicles sold	Miles driven
2009	72,000	32,000	2,304,000,000
2010	60,000	50,000	3,000,000,000
2011	48,000	70,000	3,360,000,000
2012	36,000	90,000	3,240,000,000
2013	24,000	115,000	2,760,000,000
2014	12,000	125,000	1,500,000,000
Total miles		482,000	16,164,000,000

Table S2.

Estimated miles drive for Volkswagen Notice of Violation 2

Year	Lifetime miles driven per vehicle	Vehicles sold	Miles driven
2009	72,000	5,000	360,000,000
2010	60,000	8,000	480,000,000
2011	48,000	12,000	576,000,000
2012	36,000	15,000	540,000,000
2013	24,000	20,000	480,000,000
2014	12,000	25,000	300,000,000
Total		85,000	2,736,000,000

Table S3.

Estimated Pollution Removal Rates for U.S. Forests

Data from Table 5 in Nowak et al. (2014) and Table 1 in Kroeger et al. (2014) Estimated annual removal	NO ₂ (g m ⁻² tree cover)	O ₃ (g m ⁻² tree cover)
Nowak et al. – Conterminous	0.55	5.49
Nowak et al. – Rural	0.55	5.49
Nowak et al. – Urban	0.70	5.40
Kroeger et al. – Houston area reforestation project (Phase 1 DBH <12.7 cm)	0.579	3.116
Kroeger et al. – Houston area reforestation project (Phase 2 DBH >12.7 cm)	0.600	3.194

Table S4.

Estimated Cost of Forestland Protection for Compensatory Mitigation

	10-yr acquisition	10-yr easement	20-yr acquisition	20-yr easement	30-yr acquisition	30-yr easement
Hectares	<i>127,918.64</i>		<i>63,959.32</i>		<i>42,639.55</i>	
Cost per ha	4942	2471	4942	2471	4942	2471
Transaction costs	494.2	247.1	494.2	247.1	494.2	247.1
Total cost per ha	5436.2	2718.1	5436.2	2718.1	5436.2	2718.1
Total cost (USD)	695,391,291.00	347,695,645.50	347,695,645.50	173,847,822.75	231,797,097.00	115,898,548.50



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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C.L. "Butch" Otter, Governor
John H. Tippetts, Director

August 5, 2016

Assistant Attorney General
Environment and Natural Resources Division
pubcomment-ees.enrd@usdoj.gov

RE: Public comment on proposed Partial Consent Decree, In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386

On behalf of the state of Idaho, the Department of Environmental Quality submits these comments on the above-referenced proposed Partial Consent Decree. The state of Idaho also signed on to a comment letter submitted by a large number of state Attorneys General as well as a letter from the Western States Air Resources (WESTAR) Council. In addition to the recommendations of these letters, Idaho requests that one important option be added to the Eligible Mitigation Actions and Mitigation Action Expenditures listed in Appendix D-2. The state of Idaho requests the ability to use Mitigation Funds to assist those financially unable to repair their noncompliant vehicles.

The state of Idaho commends the Department of Justice, the Environmental Protection Agency (EPA), and the state of California for obtaining Volkswagen's commitment to rectify the damage caused by the excess NOx emissions from certain Volkswagen 2.0 liter diesel vehicles. Excess NOx emissions from these vehicles have a real impact on air quality in Idaho, particularly in the Treasure Valley (Ada and Canyon Counties) where most of the noncompliant vehicles are registered.

Vehicles in Ada County and its Cities are subject to a vehicle inspection and maintenance plan pursuant to a carbon monoxide maintenance plan. In 2008, the Idaho Legislature enacted Idaho Code Section 39-116B as a proactive measure in an attempt to keep the Treasure Valley air quality below the ozone National Ambient Air Quality Standard (NAAQS). This legislation brought neighboring Canyon County into the vehicle inspection and maintenance program. To our knowledge, Idaho is the only state that implements a vehicle inspection and maintenance plan proactively – it is not required by the federal Clean Air Act. Clean air is very important to the citizens of Idaho.

There is no question that NOx from motor vehicles is the largest contributor to ozone levels in the Treasure Valley. Although unemployment has decreased, Idaho still has relatively low per capita income in comparison to other states. Consequently, one of the most important uses of mitigation funds for Idaho would be a fund to assist in emission related vehicle repairs for those who cannot afford the repairs, i.e., hardship cases. This fund would be particularly helpful for those residents living in the Treasure Valley who obtain hardship waivers which allow them to operate their noncompliant vehicles simply due to necessity. Many of these residents live in rural areas where public transportation is not available. There are no other options.

It is my understanding that states previously requested that funds be available to fund a low income vehicle repair program for owners who cannot afford emissions related repairs. The state of Idaho requests that you reconsider this option as it will certainly result in a reduction of NOx emissions in an area where it is needed and where few options exist.

Sincerely,

A handwritten signature in cursive script that reads "John H. Tippetts".

John H. Tippetts
Director



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August 5th, 2016

John C. Cruden Esq.
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5- 2-1- 11386.

Dear Mr. Cruden:

IdleAir appreciates this opportunity to comment on the Notice of Lodging of Proposed Partial Consent Decree Under the Clean Air Act, which was published in the Federal Register on July 6, 2016 (81 Fed. Reg. 44,051). The notice pertains to the proposed partial Consent Decree (CD) with the United States District Court for the Northern District of California in the lawsuit entitled In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Product Liability Litigation, Case No: MDL No. 2672 CRB (JSC).

Executive Summary

IdleAir recommends that the final settlement provide maximum flexibility for States and Native American tribes to allocate Environmental Mitigation Trust funds to truck stop electrification (TSE), which the EPA considers to be one of the most cost-effective method for reducing NOx emissions. Specifically, we ask that the final settlement expressly list truck stop electrification as an eligible mitigation action within Appendix D-2, along with the nine other activities that already include various forms of diesel retrofits and the marine equivalent of TSE. In addition, we recommend that the settlement allow the Trust to allocate up to 80 percent of the total cost of developing a new TSE facility. Finally, we recommend that the final settlement allow the Trust to fund TSE vouchers to encourage more truckers to use existing TSE facilities.

The scale of emissions from heavy duty truck idling is enormous. According to estimates by the Argonne National Laboratory, rest-period idling wastes about 1 billion gallons of diesel and results in the emission of about 55,000 tons of nitrogen oxide (NOx) released annually in the U.S. This is because most truck drivers idle their engines during overnight stays in order to maintain a safe and comfortable interior environment. In the past decade, the IdleAir network alone saved drivers 63 million gallons of diesel and offset 8,366 tons of NOx and other criteria pollutants. Moreover, the emissions generated by rest-period idling has a disproportionate impact on disadvantaged communities, where truck stops and fleet terminals tend to be located.

TSE is an EPA SmartWay verified technology, which provides long-haul truck drivers with an alternative to overnight idling. Studies conducted by the EPA and the Federal Highway Administration rate TSE as the single most cost effective activity to mitigate mobile sources of NOx emissions (less than one third of the cost per ton achieved through diesel retrofits). Significant NOx mitigation can be achieved through: (1) installation of new TSE locations; and (2) TSE vouchers for truck drivers to encourage more truckers to use existing TSE facilities. These TSE activities should be explicitly listed in Appendix D-2 as "Eligible Mitigation Actions."

Although TSE is technically eligible under the draft settlement's DERA Option, the DERA program does not provide adequate incentives to expand the use of TSE. TSE is still an emerging business that is moving toward long term sustainability. In the currently depressed diesel price environment, the DERA reimbursement cap of 25 percent for new TSE infrastructure has proven insufficient. The TSE industry has only added one new location using DERA funds under the current 25 percent grant cap. In the meantime, three DERA awards for TSE were declined or predominantly scaled back by the applicants in the past year because the economics did not work under the current guidance. And no TSE funding applications were submitted to DERA in 2016. In contrast, IdleAir has developed several new facilities (four in the last year, with five more in our construction queue) using DOT CMAQ funds, which provide a federal cost share of up to 80 percent. In addition, the DERA program does not provide TSE vouchers for truck drivers. A voucher distribution program would be an extremely efficient mechanism to dramatically increase use of existing TSE facilities.

Below we provide additional details on how facilitating the investment of VW settlement funds in TSE will lead to significant reductions of NOx and other harmful air emissions, while directly benefiting disadvantaged communities.

I. About IDLEAIR and TSE/ EPS

IdleAir's core offering, known and verified under the EPA SmartWay program as Electrified Parking Spaces ("EPS"), provides long-haul truck drivers an alternative to idling their main engines to maintain a comfortable cabin temperature, sustain vehicle battery charge and power electronics such as televisions and laptops during their overnight stays.¹ TSE/EPS provides other benefits such as cleaner air with the reduction of black carbon and soot emitted from diesel engines, reduced noise pollution, local job creation, and an increased tax base for the local economy. Truck drivers benefit from improved sleeping conditions without the noise, vibration and exhaust fumes from idling and they are therefore better rested and safer on the road. All motorists benefit from the increased alertness that results from better rested truck driver and an overall cleaner environment. See Appendix A (*Truck Drivers who sleep with their engines turned off while receiving externally supplied filtered air for heating and air conditioning enjoy a significantly improved quality of sleep compared to those who sleep with their truck engines idling. Truck Drivers are an "at risk" population more likely to be involved in crashes due to fatigue secondary to sleep disorders.*)

The basic economic and environmental proposition for IdleAir is simple - 1.5 kW/hr. hotel load of HVAC centric services can offset a full gallon of typical diesel waste per hour of idling. The American Carbon Registry recognizes IdleAir's approximate net GHG mitigation of approximately 20 lbs of CO2 for every hour of IdleAir usage, a greater than 90% reduction in GHGs net of grid-related emissions used to power IdleAir. Even if IdleAir were using grid power generated exclusively from coal-fired combined cycle power plants, our GHG reduction would still be over 75%, compared to an idling 500 hp diesel engine. Local NOx, SOx, and PM 2.5 emissions drop more than 95% when our stationary electric air conditioners replace a roaring truck engine running at idle speeds. Because TSE also offsets VOC emissions on site, there are immediate reductions in ground-level ozone formation that would otherwise impact vulnerable populations living near these facilities.

The trucking industry is heavily regulated and truck drivers themselves face a number of requirements that have a significant effect on their daily routines and quality of life. Hours of Service rules require all Class 8 drivers to take a stationary rest for 10 hours every day after no more than 14 hours of work (made up of no more than 11 hours of

¹ SmartWay Verified List of Idling Reduction Technologies (IRTs) for Trucks and School Buses. Available at <https://www.epa.gov/verified-diesel-tech/smartway-verified-list-idling-reduction-technologies-irts-trucks-and-school>. Accessed July 5, 2016. See listing number 64 and 66 for IdleAir and Shorepower Technologies, respectively, on Verified list.

driving and a maximum of 3 hours of additional non-driving work). Since drivers are in a confined metal 'box', they are obliged to seek interior comfort by idling their engine when alternatives to idling are not available. This dynamic creates a significant amount of unmet demand for EPS services such as IdleAir.

Although IdleAir's business model has historically focused on serving very large truck stops which often have more than 200 trucks parked each night, we have been broadening our efforts to include alternative locations that complement our growing truck stop network. We are typically finding exceptional utilization at the dedicated terminals of large trucking fleets and we believe a similar dynamic can be established amid the distribution centers of the trucking industry's largest customers. We also see opportunities to reduce idle waste in the vicinity of numerous national port locations. The Grow America Act, proposed by the United States Department of Transportation, would allow electric vehicle charging stations and EPS on all interstate rest areas.

IdleAir is actually an 'approved vendor' with over 750 trucking fleets, and has an active user base of 40,000 truck driver accounts. Corporate drivers can simply swipe their employer's fuel card and seamlessly pay for IdleAir as if they were buying diesel fuel. Our point of sale is also integrated on seven mega fleet terminals - this is our fastest growing segment.

In the last year and a half, IdleAir has constructed **nine** new facilities: **Four** new truck stops: *Beaverdam, OH* Flying J; *Hubbard, OH* Flying J; *Seville, OH* Flying J, *Latta, SC* Flying J, and *Lebanon, OH* Flying J (the ONLY TSE location to offer either IdleAir, high voltage plugs for eTRU enabled trailers, or electric connections at every space); and **five** new fleet terminals: *Covenant Transport Group's Chattanooga, TN* driver training center; and *EGOBA Transportadora's Nuevo Laredo* terminal, *XPO Logistics* terminal (formerly Con-way Truckload) in *West Memphis, AR*, IdleAir's first *U.S. Xpress* location in *Laredo, TX*, and expanded our nearby *XPO Logistics* terminal by six additional spaces.

II. TSE/EPS mitigates diesel emissions from OLDER truck engines.

IdleAir's customer base has a disproportionate number of older trucks, because we serve a disproportionately high population of owner operators. Unlike fleet drivers, owner operators pay for their own fuel, and are therefore most conscious about not wasting their fuel. The enclosed distribution data on our customer base indicates that the average engine year is 2006.5. See Appendix B. Accordingly, our service yields a forecastable and larger NOx reduction than services which address a more modern cross-section of the fleet on the road today. Newer model year trucks do emit substantially less NOx. However, diesel APU's and diesel compressors for transport refrigerated units can also be powered down at TSE/EPS enabled parking spaces, to the extent those units are outfitted with electric standby, a feature increasing in adoption. These unfiltered diesel engines often emit even more NOx than the main engine of new trucks, and comprise an increasing proportion of our customer base.

III. Extended truck idling is a LARGE problem with a SIMPLE solution.

The scale of emissions from heavy duty truck idling is enormous. According to estimates by the [Argonne National Laboratory](#), rest-period idling wastes about 1 billion gallons of diesel and results in the emission of about 55,000 tons of oxides of nitrogen (NOx) released annually in the U.S.² This is because most truck drivers have no alternative but to idle their engines during overnight stays in order to maintain a safe and comfortable interior environment. In the past decade, the IdleAir network alone saved drivers 63 million gallons of diesel and 8,366 tons of NOx. The pollution impacts of truck stops have a disproportionate impact on disadvantaged communities where

² See http://www.afdc.energy.gov/uploads/publication/hdv_idling_2015.pdf. Visited August 3, 2016.

most truck stops and fleet terminals tend to be located. The DERA program flags the communities surrounding truck stops for programmatic priority.

Heavy-duty trucks are the second largest and fastest growing segment of the U.S. transportation sector in terms of emissions and energy use. The trucking industry hauls about 70 percent of all freight in the U.S. Medium and heavy-duty vehicles currently account for about 20 percent of GHG emissions and oil use in the U.S. transportation sector, but are only about 5 percent of the vehicles on the road.³

IV. TSE effectively targets disadvantaged communities.

Truck Stops are typically unwanted local land uses due to the noise, pollution and traffic they cause. As a result, they are often located near disadvantaged neighborhoods, which generally lack the resources and to fight the siting and permitting of truck stops. For example, populations within 1.5 miles of IdleAir's 15 Texas locations consists of 65% more minorities and have per capita income 24% lower than the statewide average. See Appendix C. There is a close correlation between truck stop siting and disadvantaged communities. We maintain that that correlation is more direct than between the operational ranges of older diesel engines and disadvantaged communities, a factor we are understand that has helped form the current draft settlement.

V. TSE is HIGHLY cost effective.

To be sure, IdleAir agrees with eligibility of the existing nine enumerated mitigation actions. It is our position, however, that States and Tribes should have equal access to the lowest hanging fruit. The US Department of Transportation, through the Federal Highway Administration⁴, as well as EPA⁵, separately rate truck stop electrification as the single most cost effective solution to mitigate NOx emissions. Selected pages from a 2015 DOT report finding on-road idle reduction as the most cost effective technology are appended hereto as Appendix D. The EPA report cited rates TSE as the most cost effective on page 13 at median \$1.7k/ton of NOx (scoring diesel retrofit at a median cost of \$5,950/ton of NOx). We note that this report, while published in 2007, is the most recent EPA analysis on point. Total installation costs for IdleAir, the company informing the data, has decreased by around 50% since the time of the stated assumptions. We also note that sales data demonstrates that even better cost effectiveness can be achieved if limited vouchers are distributed to truck drivers for higher utilization of existing infrastructure during this period of relatively inexpensive fuel. See Appendix E.

See also [Figure 3](#). Titled Median Cost-Effectiveness Estimates (Cost per Ton Reduced) of NOx Emission Reductions. which can be found at the following link:

http://www.fhwa.dot.gov/environment/air_quality/cmaq/reference/cost_effectiveness_tables/

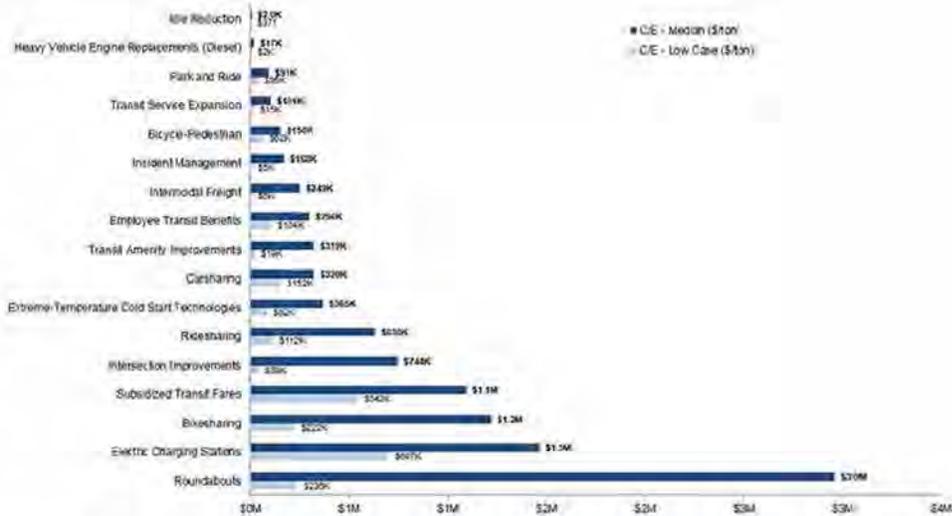
³ EPA Phase II, "by the numbers." See

<file:///home/chronos/u-55021f1df8ad9b2ec7117371ef7d27c0b1901fa5/Downloads/By-the-numbers.pdf>

⁴ National Research Council (U.S.) Committee for the Evaluation of the Congestion Mitigation and Air Quality Improvement Program. *The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 years of Experience / Committee for the Evaluation of the Congestion Mitigation and Air Quality Improvement Program*. Available <http://onlinepubs.trb.org/onlinepubs/sr/sr264.pdf>. Accessed July 6, 2016.

See also. United States Department of Transportation. *Congestion Mitigation and Air Quality (CMAQ) Improvement Program - Cost Effectiveness Tables Development and Methodology*. Available http://www.fhwa.dot.gov/environment/air_quality/cmaq/reference/cost_effectiveness_tables/report/costeffreport.pdf. Accessed July 13, 2016.

⁵ Available <https://www3.epa.gov/otaq/stateresources/policy/general/420b07006.pdf>. Accessed August 5, 2016.



VI. The DERA option will not create significant TSE network improvements.

EPA makes clear that TSE is eligible for settlement funds under the DERA Option. The requirement to fund TSE through DERA, however, is not a simple expansion of the eligibility list. This is especially true for TSE, which has unique obstacles under DERA. States and Beneficiaries will simply not have a fair chance to support TSE under the current draft, for the following reasons:

1. IdleAir does not expect States and Tribes to incur the administrative burden of DERA when they can directly fund nine other mitigation actions. Some States (four we are currently aware of) currently decline their DERA allocations altogether. The VW settlement will allow beneficiaries an alternative to declining federal funds, which will increase the number of beneficiaries that chose alternatives to DERA.

2. Even if beneficiaries are convinced that that the cost effective technology is worth the additional administrative burden, the DERA rules simply do not work for TSE from an industry standpoint. As previously stated, with diesel prices so low (DOE national diesel prices have declined over 40% since 2014 prices averaged more than \$4.00/gallon), the DERA reimbursement cap of 25 percent for new TSE infrastructure has proven insufficient. Within the DERA rules, other technologies have a higher reimbursement cap than TSE, more akin to those caps afforded to the nine enumerated mitigation actions within Appendix D-2 of the settlement. The TSE industry has only grown by one location using DERA funds under the current cap, an IdleAir facility in in Chattanooga, TN. Three DERA awards for TSE were either declined or predominantly scaled back by the applicants in the past year, and no TSE applications were submitted by any entity under DERA in the 2016 round. In contrast, IdleAir has developed several new facilities (four in the last year, with five in our construction queue) using DOT CMAQ funds, which provides a federal cost share of up to 80 percent. In addition, the DERA program does not provide TSE vouchers for truck drivers. This would be an extremely efficient mechanism to dramatically increase use of existing TSE facilities. IdleAir remains eager to coordinate with the DERA program administrators with feedback on how it can be more viable and fair for TSE, however, the current version is simply a nonstarter in this market environment.

VII. TSE/EPS provides a critical network for APUs, eTRUs, and EV charging corridors.

Long range Transport Refrigeration Units (TRUs) are normally cooled by unfiltered diesel compressors that idle 24-hours per day. TSE/EPS providers are establishing a network for refrigerated fleets to be able to plug in and

power down while the trailer is at rest. Long Range TRU fleets are unlikely to abandon diesel backup, but more than 70% of TRU idling can be addressed with hybrid electric TRUs, or eTRUs that can connect to our charging stations and at the terminals of the largest refrigerated fleets in the country, their customer facilities, and public truck stops. The existing EPS network will prop up this nascent industry of TRU conversions to hybrid units.

EPA Phase II expects increased adoption of diesel auxiliary power units. CARB's chief complaint relates to the additional NOx introduced by said APUs. A robust TSE network will a) mitigate the need for many trucks to buy APUs and b) provide for electric standby for the increasing proportion of APUs that are capable of electric standby.

Finally, in addition to the current network of TSE locations, TSE providers have existing master leases with the largest truck stop chains in the country. It is inexpensive and efficient for TSE to collocate with high speed electric vehicle charging infrastructure. In fact, several already are. Support for TSE is supporting the network for EV charging where such stations are needed the most.

VII. Our Proposal.

We ask that the final settlement expressly list truck stop electrification as an eligible mitigation action within Appendix D-2 and provide for support in the following ways:

A. Vouchers. We recommend that Beneficiaries be permitted to allocate a portion of their funds for a TSE a voucher program that is designed to increase utilization at existing facilities within state or tribal lands. The program may decrease the cost of service to drivers by up to \$1.00 per hour. Additionally, beneficiaries may provide a \$20 credit for new drivers to use TSE. Our data proves that utilization increase by more than 100% for \$.90 decrease in our hourly price between truckstops @ \$2.37/hour and large fleet terminals @ \$1.47/hour. This effectively reduces the cost per ton of NOx to under \$1,000. We have found that meaningful price elasticity exists for TSE demand all the way down to absolute cost to drivers and fleets at \$.75/hour at our highest volume fleet terminal which has been averaging more than 200% of our normal forecast overnight utilization per parking space. Our composite Large Fleet terminal pricing which averaged \$1.47/hour for YTD 2016 has shown utilization averaging slightly more than 9 hours/space per day in July 2016. Alternatively, we have seen our highest price truckstop-centric utilization among independent Owner Operator drivers decline by more than 35% in IQ16 as diesel prices for the first time in our operating history actually temporarily dipped below our \$2.37 retail price. DOE national diesel prices bottomed at \$2.00/gallon in February 2016 and it was not until diesel prices rebounded back above \$2.35/gallon combined with a lowering of our own prices that we were able to soften the decline in utilization among this economically challenged segment of our customer base.. We believe that a modest investment (less than \$5mm) of vouchers administered responsibly among drivers and fleets can help even the playing field for drivers of older vintage trucks while cost effectively leveraging our existing national truckstop infrastructure. See Appendix E.

B. Infrastructure subsidy. We simply ask that the VW Settlement permits States and Tribes to fund TSE in the same manner that DOT's Congestion Management and Air Quality, with an across the board 80% cap on federal reimbursement. It works, it is simple, and it achieves remarkable cost effectiveness.

In conclusion, IdleAir appreciates the opportunity to comment on the partial consent decree. We share your desire to maximize the air quality mitigation realized from the \$2.7B fund. Thank you for considering our perspective, that allowing States and Tribes flexibility to tackle the 1B gallon/year idling problem will further settlement goals.

We invite any opportunity for a followup discussion. Should you wish to have any questions, please feel free to contact me at yale.klat@idleair.com, or 646.481.6684.

Respectfully,

A handwritten signature in black ink, appearing to read "Yale Klat". The signature is written in a cursive style with a large initial "Y".

Yale Klat

APPENDIX A

Better Sleep for Long-Haul Truckers: A comparison of three conditions. Engine Idling, Engine Off, & in the Sleep Lab.

Sam A. Kabbani, MD, CMD; Robert A. Haring, BA, RPSGT

East Tennessee Neurology Clinic, Sleep Disorders Center, Knoxville, TN.

ABSTRACT

Study objectives: To evaluate the sleep of Truck Drivers with full-attended Polysomnography on Truckers in their own trucks and on their own schedules (1) with their engine idling, (2) with their engine turned off, (3) in the Sleep Lab.

Design: Test/Retest pilot study with subjects serving as their own controls.

Subjects: 25 truck driver volunteers (22 male) tested under three conditions.

1. With their engines idling (EO); drivers currently must let their engines run while parked to obtain power for heating or cooling while they sleep in the truck cab.
2. With their engines turned off, using conditioned air provided by the Advanced Travel Center Electrification System of IdleAire (IA) Technologies Corporation.
3. In the Sleep Lab (Lab) with standard rooms.

Settings: Petro Truck Stop; Watt Road exit; Knoxville, TN.

East Tennessee Neurology Clinic; Sleep Lab; Knoxville, TN.

Results: Both objectively by polysomnography and subjectively by questionnaire, sleeping with the engine off (IA) was preferred by 84% of the drivers and provided significantly better ($p=.0023$) Sleep Efficiency (84.96% vs 77.73% EO & 72.89% Lab), and significantly fewer ($p=.001$) EKG arrhythmias (42.24 vs 57.92 Lab & 85.6 EO). SAO₂ was significantly lower ($p=.003$) during EO (81.04% vs 85.39% IA & 86.4% Lab) but no significant difference was observed between IA and Lab.

Significant PLMS (> 10.0) was observed in 80% to 88% of all drivers under each test with a significantly higher index ($p=.003$) observed in the Lab.

Significant RDI (> 5.0) was observed in 52% to 64% of all drivers under each test.

Indices were highest during Engine Idling (EO) but not significantly different.

100% of drivers were observed Snoring at least occasionally under each test.

100% of drivers were observed to have at least four Upper Airway Resistance Syndrome (UARS) events under each test (range 4-118).

64% of all drivers indicated poor sleep hygiene with highly variable Bed & Rise Times.

44% of all drivers scored 10 or higher on the Epworth Sleepiness Scale (ESS).

Mean Body Mass Index (BMI) =33.68 kg/m².

Conclusions: Truck Drivers who sleep with their engines turned off while receiving externally supplied filtered air for heating and air conditioning enjoy a significantly improved quality of sleep compared to those who sleep with their truck engines idling (to provide power for the truck's heating and air conditioning system). Truck Drivers are an "at risk" population more likely to be involved in crashes due to fatigue secondary to sleep disorders. Truckers face unique circumstances contributing to unhealthy lifestyles, increased mortality, and job dissatisfaction.

KeyWords: Truck Driver, Truck Stop, Engine Idling, IdleAire, Diesel Exhaust, Sleep.

Citation: Kabbani SA; Haring RA. Better Sleep for Long-Haul Truckers: A comparison of three conditions, Engine Idling, Engine Off, & in the Sleep Lab. (submission pending).

Introduction

Truck Driving is globally recognized as an unhealthy occupation in which the job itself contributes to poor health by promoting erratic schedules, lack of exercise, stress, weight gain, poor diet & poor sleep.³⁻⁸ Exposure to diesel emissions alone have been linked to several types of cancer in this population including pancreatic⁹, bladder^{10, 11}, laryngeal¹², lung¹³⁻¹⁷, renal cell¹⁸, gastric cardia¹⁹, even TB²⁰ and infant leukemia²¹.

Further, the lack of home amenities (bed, bathroom, TV, internet), inadequate health care, and social isolation on the road can have a profound psychological impact on drivers which contributes to the high driver turnover rate in the trucking industry²²⁻²⁶ and can encourage risky health behaviors such as drug use²⁷⁻³³, and prostitution³⁴⁻³⁷.

Trucking is a rapidly growing industry that has gained significant attention recently, notably from the Department of Transportation's Federal Motor Carrier Safety Administrations (FMCSA) flip-flopping on the revised Hours-of-Service Rule¹. Data was collected during this time (Mar-Aug, 2004).

A primary concern involves wrecks due to tired truckers. There are an estimated 2.5 million drivers in the trucking industry logging 10 billion miles per year in the US⁴⁰. The National Highway Traffic Safety Administration's National Center for Statistics and Analysis (NHTSA/NCSA) states that in 2002 large trucks were involved in 434,000 traffic crashes in the U.S. killing 4,897 people^{41, 41a} which cost an average of \$51,000 per accident and \$2.7 million per accident when fatalities were involved^{42,56}. The National Transportation Safety Board (NTSB) reports that roughly 57% of these crashes are fatigue related². A 2000 study reported that 47.1% of long-distance truck driver survey respondents had fallen asleep at the wheel, 25.4% having done so within the past year⁴³. Crash rates are highest in the early morning hours correlating with highest sleep propensity^{38,39}. Several studies including the most recent "Sleep Habits and Accident Risk Among Truck Drivers: A Cross-Sectional Study in Argentina" (Perez-Chada et al) appearing in *SLEEP* 2005⁹⁰ have shown that truck drivers routinely get fewer hours of sleep per night, have poor sleep hygiene, and are more prone to sleeping disorders. Other risk factors contributing to crashes include youth, inexperience, shift work, alcohol, and drug use⁴⁴⁻⁵⁵. Unfortunately, most of these studies have only utilized questionnaires with little or no correlating objective data having been collected.

This project was designed to determine whether engine idling is a factor in Truck Driver sleep by performing full-attended sleep studies following American Academy of Sleep Medicine (AASM) guidelines⁵⁹ at a truck stop in Knoxville, Tennessee with the drivers in their own trucks and on their own schedules. IdleAire* is a privately held company headquartered in Knoxville, TN. which is installing the first nationwide advanced truck stop electrification ("ATE") network. This service uses an external HVAC unit and externally supplied electrical power to provide filtered in-cab heating and air conditioning, electric shore power, communication, entertainment, and educational services to drivers of heavy-duty class 7 & 8 diesel, long haul trucks. The IdleAire system allows drivers to turn off their engines while they are parked and maintain a comfortable cab temperature. It is being installed in commercial travel centers and other parking facilities across the country where drivers park and idle their truck engines for extended periods thereby permitting Truckers to sleep with their engines turned off during rest periods.

Methods:

25 drivers (22 male) tested under three different conditions: Engine On (EO), Engine Off with IdleAire (IA), and in our Sleep Lab with conventional rooms (Lab).

Full attended Sleep Studies performed following AASM standards by monitoring EEG at C3, C4, A1, A2, O1, O2 of the International 10/20 system, EOG, Chin EMG, Nasal/Oral airflow & pressure transducer, Snore microphone, EKG, Chest/Abdominal belts, Leg EMG, pulse/oximetry, Audio/Video (camera/intercom) on portable XLTEK data acquisition units* (Ontario, Canada). Studies were scored blindly using R&K and AASM guidelines.⁶⁰

Participants:

29 drivers originally took part but four dropped out after the first study and their data was not utilized except to note that two of these drivers had significant OSA (RDI of 42 and 66 –the later having a 1min SOL and multiple SAO2 desats into the 40’s).

Driver volunteers were chosen on site based on willingness to participate and availability to be in Knoxville, TN on three mostly non-consecutive nights over a three-month period.

Drivers were paid \$20 for EO, \$20 for IA, and \$60 for the Lab tests respectively.

Drivers were also given free use of IdleAire during that portion of testing.

Drivers were further promised anonymity to encourage honest answers.

Data was collected from March through August of 2004.

We had originally hoped to have all drivers spend the first night in the Lab as first night effect would be expected to be greatest⁶¹ but this quickly proved impossible as drivers were extremely reluctant to leave their trucks unattended. We therefore counterbalanced first night effect by spreading it over treatment conditions.⁶²

Of the 25 subjects 22 were males (88%) and 3 were females (12%).

Mean age 37.28 years (range 23-57).

Mean Ht 5’9.12 feet (range 5’0-6’2).

Mean Wt 228.2 lbs (range 120-362).

Mean BMI 33.68 (range 18.8-49.6)

12 drivers (48%) had used IA before and 13 (52%) had not.

Of the 12 who had used IA:

4 had 1st test on IA, 4 had 1st test with EO, and 4 had 1st test in Lab.

Of the 13 who had not used IA:

5 had 1st test on IA, 4 had 1st test with EO, and 4 had 1st test in Lab.

Participants were asked to fill out questionnaires and release forms prior to testing as well as post sleep questionnaires after each test. Questionnaires included our standard Sleep Lab Questionnaires, Driver Specific Questionnaire, The Epworth Sleepiness Scale, The Fatigue Scale, The Sleep Hygiene Inventory, and verbal questions during interview and hook-up. Sleep Diary was attempted but only 4 drivers (16%) correctly completed it.

CDL requirements vary from state to state but call for drivers to “be able to read and speak English well enough to understand traffic signs, prepare reports, & speak with law enforcement officials and the public”.⁶³ Many drivers however had difficulty filling out the questionnaires.

Results:

-Sleep Efficiency was significantly better ($p=.0023$) with the engines turned off.

IA: 84.96% range 64.6%-98.9%, EO: 77.73% range 45.8%-94.0%, Lab: 72.89% range 25.9%-88.5%

-EKG arrhythmias (includes all premature and irregular beats/rhythms PVC, multifocal PVC, PVC couplets, PVC triplets, bi, tri, & quadgeminal PVCs, PAC, PJC, PAT, SA, SBT, etc) were significantly lower ($p=.001$) with the engines turned off.

IA: 42.24 range 0-271, EO: 85.68 range 0-516, Lab: 57.92 range 0-342.

We consider this finding most intriguing as it indicates a correlation to inhaled diesel emissions and their impact on the heart. Further supported by our findings in SAO2. Several articles show that truck drivers are more prone to heart attack⁶⁸⁻⁷⁰ and heart disease⁷¹. Many smaller studies have even shown changes in heart rate and function while drivers were on the road⁷²⁻⁷⁵. This further correlates well with the Peters study which shows that being in traffic (or that particulate air pollution from traffic)⁶⁴ may trigger or raise the risk of Heart Attack almost three-fold.

Arrhythmias increased insignificantly during the Lab phase. We attribute this to driver stress associated with first night effect from being away from their rigs.⁶¹

-SAO2 (blood oxygen levels %) baseline & nadir (low%) averages were significantly lower ($p=.003$) during the EO phase but no findings were observed between IA & Lab.

-IA: 94.68%, -EO: 93.76%, -Lab: 94.76%

-IA low: 85.39%, -EO low: 81.04%, -Lab low: 86.4%

That SAO2 levels were consistent in both the Lab and IA phases suggests that the difference making SAO2 lowest on the EO phase would be attributable to inhaling increased diesel emissions while the engine was idling.

-Respiratory Disturbance Index (RDI) shows the highest number of respiratory events occurred under the Engine On (EO) treatment condition while indices remained consistent and lower, but not significantly so, for both IA and Lab phases. We attribute this to increased inhalation of diesel emissions during the EO phase.

IA: 12.62, EO: 16.2, Lab: 12.46.

-RDI > 5.0⁷⁷ # of drivers: IA: 16 (64%) range 0-76.9, EO: 16 (64%) range .2-95.8, Lab: 13 (52%) range .2-74.8.

>50% of all truck drivers tested had significant breathing impairment under each treatment condition compared to 2-4% in the general population⁶⁶.

-PLMS was significantly higher ($p=.003$) under the Lab portion of the test. No significant difference observed between EO and IA. Significant night to night variability is known to exist in PLMS^{76,67}. The additional anxiety drivers experienced by having to leave their trucks and cargo while in the lab (most companies require drivers to remain at least within visual range of their trucks and loads)⁶³ may have been a factor. This does correlate with our finding of increased wake time seen in the Lab phase.

IA: 37.45, EO: 40.74, Lab: 50.02.

-PLMSI > 10.0⁷⁶ # of drivers: IA: 20 (80%) range 0-160.9, EO: 20 (80%) range 1.3-138.7, Lab: 22 (88%) range 0-222.

>80% of all drivers tested had significant limb movement disorder (PLMS) under each treatment condition compared to 5% of people between 30-50yrs and 29% of people over 50yrs⁶⁷.

-%Time Awake was significantly higher ($p=.003$) during the Lab phase compared to both EO and IA. Possibly due to increased first night effect from being away from their rigs.

-Arousals were significantly ($p=.003$) increased during the EO phase and lowest on the IA testing phase correlating to lowest PLMS and RDI indices, as sleep efficiency was highest relative to EO & Lab testing phases respectively. Differences were not statistically significant between IA and Lab.

-Stage 1 Sleep% was significantly lower ($p=.0023$) during the IA phase compared to both Lab and EO. This correlates with findings of better sleep efficiency seen during this test. No significant differences were observed in Stages 2, 3, 4, and REM percentages.

Total Sleep Time (mean =4hrs 46min. ± 3.52) was not significantly different across conditions although the changing Hours-of-Service Rule¹ encountered during the data collection process of this research may have played a factor.

-Driver Preference:

Drivers were asked to select their preferred sleep environment from the test.

16 drivers (64%) chose IdleAire (non-idling with externally supplied air).

5 drivers (20%) chose the Sleep Lab.

4 drivers (16%) chose Engine On idling.

21 drivers (84%) stated that if IdleAire were available, they would prefer to turn off their engines and use an external source of heating and air conditioning during rest periods rather than leaving their engines idling. A savings in fuel costs while using an external source vs idling played a role in the response of some drivers as an idling engine will consume approximately 1 gallon of fuel per hour⁵⁷.

All test subjects indicated they would prefer to sleep at home. However, many indicated that they need a night or two to adjust after being on the road. This may be due to the change in Engine noise, vibration, or environment.

-Other Driver Information:

20 drivers (80%) use Caffeine or OTC stimulants.

19 drivers (76%) had TST of less than six hours.

16 drivers (64%) have variable bedtimes/risetimes greater than three hours.

14 drivers (56%) report to get less than six hours of sleep routinely.

14 drivers (56%) Smoke.

12 drivers (48%) felt IdleAire/internet access could decrease Sexually Transmitted Diseases (STDs) a significant problem in the trucking industry³⁴⁻³⁷.

11 drivers (44%) have an ESS score of greater than 10 (indicating excessive tiredness).

10 drivers (40%) report Depression.

10 drivers (40%) complain of Pain.

9 drivers (36%) take Naps.

7 drivers (28%) complain of Head Aches.

7 drivers (28%) complain of Stress.

6 drivers (24%) complain of Reflux or GERD.

4 drivers (16%) use Alcohol.

4 drivers (16%) use illicit drugs (methamphetamine, coke, pot, heroin, pain pills, other).

3 drivers (12%) report High Blood Pressure (blood pressure was not taken during tests).

3 drivers (12%) report Diabetes.

2 drivers (8%) report Asthma.

1 driver (4%) reports Hernia.

1 driver (4%) was observed to have Parasomnia (night terrors).

1 driver (4%) was observed to have seizure discharges.

Discussion:

Our findings confirm previous studies showing Truck Drivers to be a particularly unhealthy group. Significant RDIs were seen in > 50% of drivers compared to 2-4% in the general population⁶⁶ and significant PLMS was seen in > 80% of drivers compared to 5% of people 30-50yrs and 29% of people over 50yrs⁶⁷. This is an “at risk” population with unique problems that the general public often cannot relate to, but frequently suffer the consequences from in the form of crashes. Truck drivers also have an increased risk of cancer, heart attack, musculoskeletal disorders^{80,81}, and other ailments⁸²⁻⁸⁵.

Our data suggests that a non-idling sleep environment provides significant health benefits to drivers. Other countermeasures to driver fatigue have been tried without success. These include bright light⁸⁵, temperature variation⁸⁶, Circadian Alertness Simulator⁸⁷, fitness programs⁸⁸, and diet⁸⁹.

In personal interviews & on questionnaires drivers relate that while sleeping with the engine on, whenever the engine coughs or sputters, it causes an arousal with “Reefer Trucks” (refrigeration/freezer trucks) being the worst due to regulating cargo temp. Truck Drivers without an on-board source of electrical power are forced to park where they can and leave the engine running. Drivers state that having to park on an incline such as an On or Off Ramp, will effect sleep and comfort as the direction they park will roll them into or out of bed. “It’s like sawing the legs off one side of your bed at home”. Drivers also try to park where there is food, fuel, restrooms, & showers available, and where radio & TV reception is good as drivers often must spend days, weeks, and months on the road. At the truck stops, noise from other trucks, drivers, prostitutes & drug dealers (going truck to truck looking for business), etc, frequently disturbs sleep^{68,69,78,79}. It was thought that the change from engine vibration to stillness might cause initial Sleep Onset delays but familiarity with the environment (truck cab) seemed to negate this making Sleep Efficiency and wake time poorest in the Lab.

Truck drivers are at greater risk for crash due to factors including decreased Total Sleep Time, increased OSA and PLMS, as well as poor sleep hygiene. Future research should look toward implementing treatment strategies for these patients and assessing their effectiveness and practicality on the road. A comparison between non-idling trucks parked with and without ATE systems would be interesting but not realistic as seasonal temperatures play a great role in both ATE and idling use. It should be noted that several states have enacted “no idling” laws⁵⁸. Idling for over 5 minutes is a ticketable offense regardless of temperature unless a health condition or pet is present.

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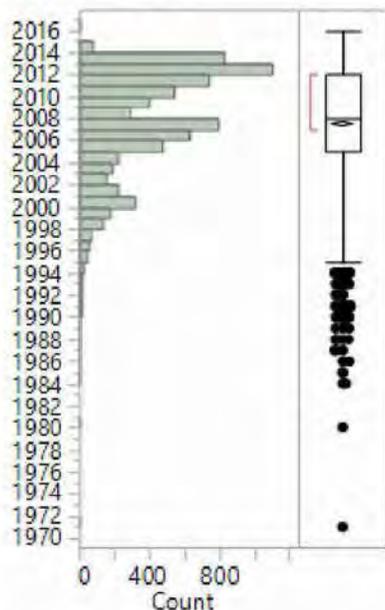
* IdleAire Technologies Corporation. 410 North Cedar Bluff Road, Suite 200, Knoxville, TN 37923. www.idleaire.com

* XLTEK 2004 portable data acquisition units. 2568 Bristol Circle, Oakville, Ontario, Canada, L6H5S1. www.xltek.com

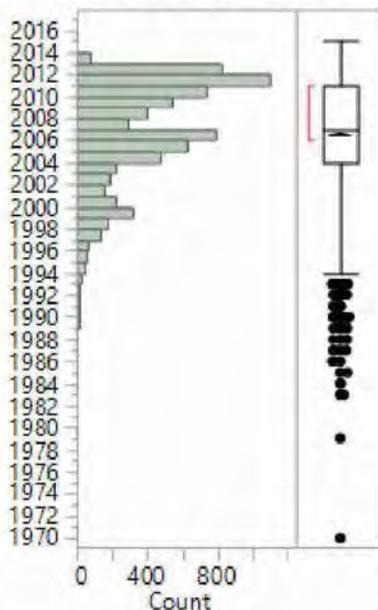
APPENDIX B

Distributions

Truck Model Year



Engine Model Year (truck-1)



Quantiles

100%	maximum	2016
75%	quartile	2012
50%	median	2008
25%	quartile	2005
0%	minimum	1971

Summary Statistics

Mean	2007484
N	7516
Sum	15088250
N Missing	22
N Zero	0
N Unique	34
Minimum	1971
Maximum	2016
Median	2008
Range	45

Quantiles

100%	maximum	2015
75%	quartile	2011
50%	median	2007
25%	quartile	2004
0%	minimum	1970

Summary Statistics

Mean	2006484
N	7516
Sum	15080734
N Missing	22
N Zero	0
N Unique	34
Minimum	1970
Maximum	2015
Median	2007
Range	45

APPENDIX C

IdleAir - Current TX Locations - Local Community Demographics - Within 1.5 Mile Radius

IdleAir Location Name	Address	City	Hwy./ Exit	Minority %	Per Capita Income
Conoco - Baytown	10403 Interstate 10E #A	Baytown	I-10, Exit 797	50%	\$ 29,839
Love's #401 - Baytown	1703-D East Fwy	Baytown	I-10, Exit 789	67%	\$ 21,220
Flying J - Dallas	34100 LBJ Freeway	Dallas	I-20, Exit 472	99%	\$ 13,887
DFW Oil/ Exxon	8181 S. Lancaster Rd.	Dallas	I-20, Exit 470	95%	\$ 15,162
Love's #214 - El Paso	1302 Horizon Blvd.	El Paso	I-10, Exit 37	98%	\$ 10,042
Flying J # 728 - El Paso	1301 Horizon Blvd.	El Paso	I-10, Exit 37	98%	\$ 10,042
Pilot #434 -Fort Worth	2400 Alliance Gateway	Ft Worth	I-35, Exit 65	29%	\$ 36,669
Cal Ark - Laredo	4431 Pan American Blvd.	Laredo	FM 1472 Mines Rd.	89%	\$ 17,852
Con-Way Truckload Terminal	14610 Mines Road	Laredo	I-35, Exit 8	92%	\$ 18,535
Werner Enterprises Terminal	1201 Carrier Dr.	Laredo	I-35, Exit 12	93%	\$ 18,795
CR England - Laredo	8422 Amparan Rd.	Laredo	I-35 Exit 8	92%	\$ 18,740
Flying J - Laredo	1011 Beltway Pkwy.	Laredo	I-35 & Exit 13	93%	\$ 18,795
Pilot #377 -Laredo	1101 Uniroyal Drive	Laredo	I-35 & Exit 13	93%	\$ 18,795
TSI - Mesquite	3900 Forney Rd.	Mesquite	I-80 & S.Town E.Blvd.	72%	\$ 17,799
Pilot #431 -Orange	2205-B Hwy 62	Orange	I-10, Exit 873	12%	\$ 27,130
Pilot #432 -Robinson	8055 S I-35	Robinson	I-35, Exit 328	32%	\$ 29,634
TOTAL				75%	\$ 20,184

*Source: EJSscreen ACS Summary Report, July 2016
Compare with state-wide TX: Minority 20.3% and per capita \$ 26,513.*

APPENDIX D

CONGESTION MITIGATION AND AIR QUALITY (CMAQ) IMPROVEMENT PROGRAM

Cost-Effectiveness Tables Development and Methodology

Prepared for:

**Office of Natural Environment
Office of Planning, Environment, and Realty
Federal Highway Administration
U.S. Department of Transportation**

December 3, 2015

Prepared by:

**Volpe National Transportation Systems Center
Office of the Assistant Secretary for Research and Technology
U.S. Department of Transportation**

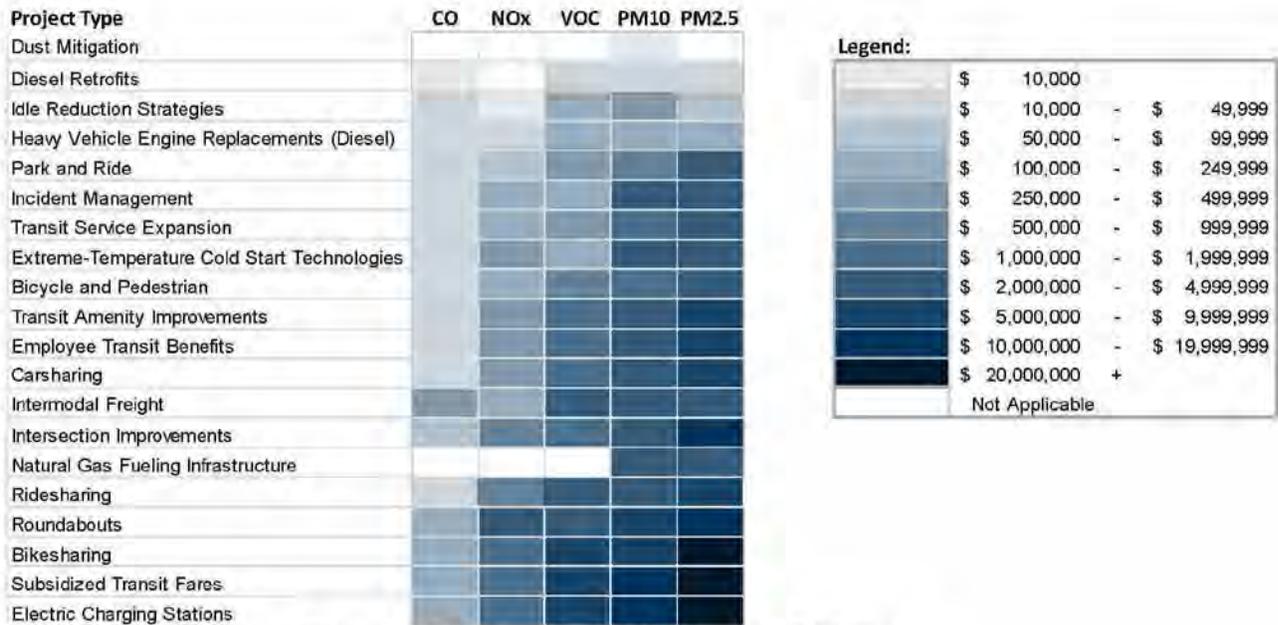


Figure 1. Median Cost-Effectiveness Estimates (Dollars per Ton of Pollutant Reduced).

The analysis yielded a broad range of cost-effectiveness estimates, represented in terms of dollars per ton of pollutant reduced. The most critical findings relate to project types that indicate particularly strong or weak cost-effectiveness, for either individual pollutants or across the range of pollutants.

Project Types with Strong Cost-Effectiveness

Table 1 summarizes the best-performing project types by pollutant, based upon the distributions of cost-effectiveness measures evaluated at the median:

Table 1. Project Types with Strongest Estimated Cost-Effectiveness.

Project Type	Pollutants with Most Cost-Effective Reduction
Idle Reduction Strategies	All pollutants
Heavy-Duty Vehicle Engine Replacements	NOx, VOCs, PM ₁₀ , PM _{2.5}
Diesel Retrofits (DOCs, DPFs)	CO, PM ₁₀ , PM _{2.5} and VOCs
Transit Service Expansion	NOx, VOCs, CO
Park and Ride	NOx, VOCs, CO
Extreme-Temperature Cold Start	CO and VOCs
Incident Management	CO and VOCs
Intermodal Freight	NOx
Dust Mitigation	PM ₁₀

Idle Reduction Strategies

This section reviews the analysis of idle reduction strategies (IR), including idle reduction strategies projects. These projects center on the use of technologies to provide power to heavy-duty trucks when the vehicles are not in motion. By providing means to power heavy-duty trucks that do not rely on idling, IR can support shifts to lower-emission energy consumption by heavy-duty trucks. Additionally, IR reduces localized community and driver exposure to diesel engine emissions. Also, plug-in idle reduction strategies may enable refrigerated trailers to plug in rather than operating a small non-road engine.

Key IR technologies include auxiliary power units (APUs), overhead ducting systems (chiefly, IdleAire) and plug-in electric power and heating and cooling systems (e.g., Shorepower). The set of available project information centered on plug-in systems and IdleAire projects; each of these project sub-types were included in the analysis.

In the analysis, the effects of IR projects were investigated at the heavy-vehicle-fleet-average level for combinations of heavy vehicle model years and road types. The central emission information for the analysis came from MOVES model runs, which reported emission rates for vehicles at idle (in grams per hour), by model year (weighted by the share of vehicles in operation within each model year) and road type. In all, 101 IR scenarios were analyzed.

The steps required to conduct the analysis of IR projects involving plug-in systems include:

- Generate per-hour emission rates for PM_{2.5}, PM₁₀, NO_x, VOC and CO in MOVES2010b for each model year and road type in the analysis;
- Identify estimates of annual vehicle use (idling hours) for vehicles;
- Identify estimates of the technological effectiveness of IR technologies;
- Identify estimates of IR use (percentage of time facilities are used, or hours of idling reduced per day per unit);
- Identify estimates of project lifetimes; and
- Identify estimates of project costs.

The MOVES runs yielded estimates of emission rates (in grams per hour) for each of the pollutants in the study, by model year and road type, using national-average travel profiles. The estimated annual impacts on pollutants were identified by multiplying the estimated effectiveness of IR technology (e.g., a 60-percent reduction in NO_x emissions at idle per device per hour) by the number of idling hours reduced per year and the per-hour emission rates for vehicles at idle.

Lower- and upper-bound values for device utilization rates (15 percent and 60 percent per hour), impact of idling activity (reduction of 25 percent of hoteling and reduction of 100 percent of

hoteling) and project costs (\$4,500 and \$11,500 per space) were used to identify lower- and upper-bound cost-effectiveness estimates. A constant, 15-year project lifetime was assumed.

To estimate individual cost-effectiveness for each model year/road type combination in the analysis, the estimated cost for a given project was divided by the sum of estimated annual emission impacts across project lifetimes. Each estimated annual emission impact was identified as the product of the estimated change in a given emission rate (i.e., with the use of idle reduction versus without) and the assumed annual volume of idling activities for vehicles. This yields a value of dollars per gram of pollutant abated over the project lifetime, which can then be converted to dollars per ton abated.

The analysis of IR projects involving IdleAire was conducted primarily using outputs from the DEQ, and included the following steps:

- Identify the vehicle type toward which the IR strategy would be applied (e.g., Class 8 long-haul truck);
- Identify the model year for the vehicle (endpoints of 1995 and 2010 were selected for the analysis);
- Identify estimates of annual vehicle use (hoteling hours) for vehicles, with the DEQ default values applied;
- Identify estimates of the technological effectiveness of IR technologies, with the DEQ default values applied;
- Identify estimates of IR use (percentage of time facilities are used, or hours of idling reduced per day per unit), with the DEQ default values applied;
- Identify estimates of project lifetimes, with the DEQ default values applied; and
- Identify estimates of project costs.

Sample Analytical Scenario: Idle Reduction Strategy (IdleAire)

As an illustrative example, consider the use of an IdleAire device by model year 2000 heavy-duty trucks traveling on urban unrestricted (i.e., highway) roads.

In this scenario, we assume the following details:

- The effective fleet-average emission rates for MY2000 heavy-duty trucks for travel on urban unrestricted roads are 109.7 grams per hour for NO_x, and 6.096 grams per hour for PM_{2.5};
- the IdleAire device is utilized 60 percent of the time (i.e., 60 percent occupancy rate);
- the IdleAire device reduces 100 percent of idling activity, with no offsetting emissions;
- the facility is used 365 days per year;
- the service life of the technology is 15 years; and
- the cost of the project is \$11,500 per electrified space.

Step One: Shifting MY2000 heavy-duty trucks using the facility from 100 percent idling to 40 percent idling (i.e., using the facility 60 percent of the time) would lead to the following annual reductions in emissions of NO_x and PM_{2.5}:

Table 18. Sample Calculation of Annual Emission Impacts of an Idle Reduction Project (Model Year 2000 Fleet-Average Heavy-Duty Vehicle with IdleAire Technology, Urban Unrestricted Roads).

Pollutant	Emission Reduction from Idle Reduction Strategy (IR)	Baseline Idle Emission Rate (grams/hour)	Daily Idling Activity Affected (hours)	Daily Reduction in Emissions from IR (grams)	Annual Reduction in Emissions from IR (grams)
NO _x	100%	109.7	14.4	1,580	576,583
PM _{2.5}	100%	6.096		87.8	32,041

Step Two: Each of the estimated annual emission impacts is multiplied by the project lifetime to identify project-level emission impacts:

Table 19. Sample Calculation of Total Emission Impacts of an Idle Reduction Project (Model Year 2000 Fleet-Average Heavy-Duty Vehicle with Plug-In Technology, Urban Unrestricted Roads).

Pollutant	Annual Reduction in Emissions from IR (grams)	Project Lifetime (years)	Total Reduction in Emissions from IR (grams)	Total Reduction in Emissions from IR (tons)
NO _x	576,583	15	8,648,748	9.534
PM _{2.5}	32,041		480,609	0.530

Step Three: The project cost is divided by the estimated project-level emission impacts to yield cost-effectiveness estimates:

Table 20. Sample Calculation of Cost-Effectiveness Estimates for an Idle Reduction Project (Model Year 2000 Fleet-Average Heavy-Duty Vehicle with Plug-In Technology, Urban Unrestricted Roads).

Pollutant	Total Reduction in Emission from IR (tons)	Project Cost	Cost-Effectiveness (dollars per ton)
NO _x	9.534	\$11,500	\$1,206
PM _{2.5}	0.530		\$21,707

Summary Cost-Effectiveness Estimates: Idle Reduction Strategies

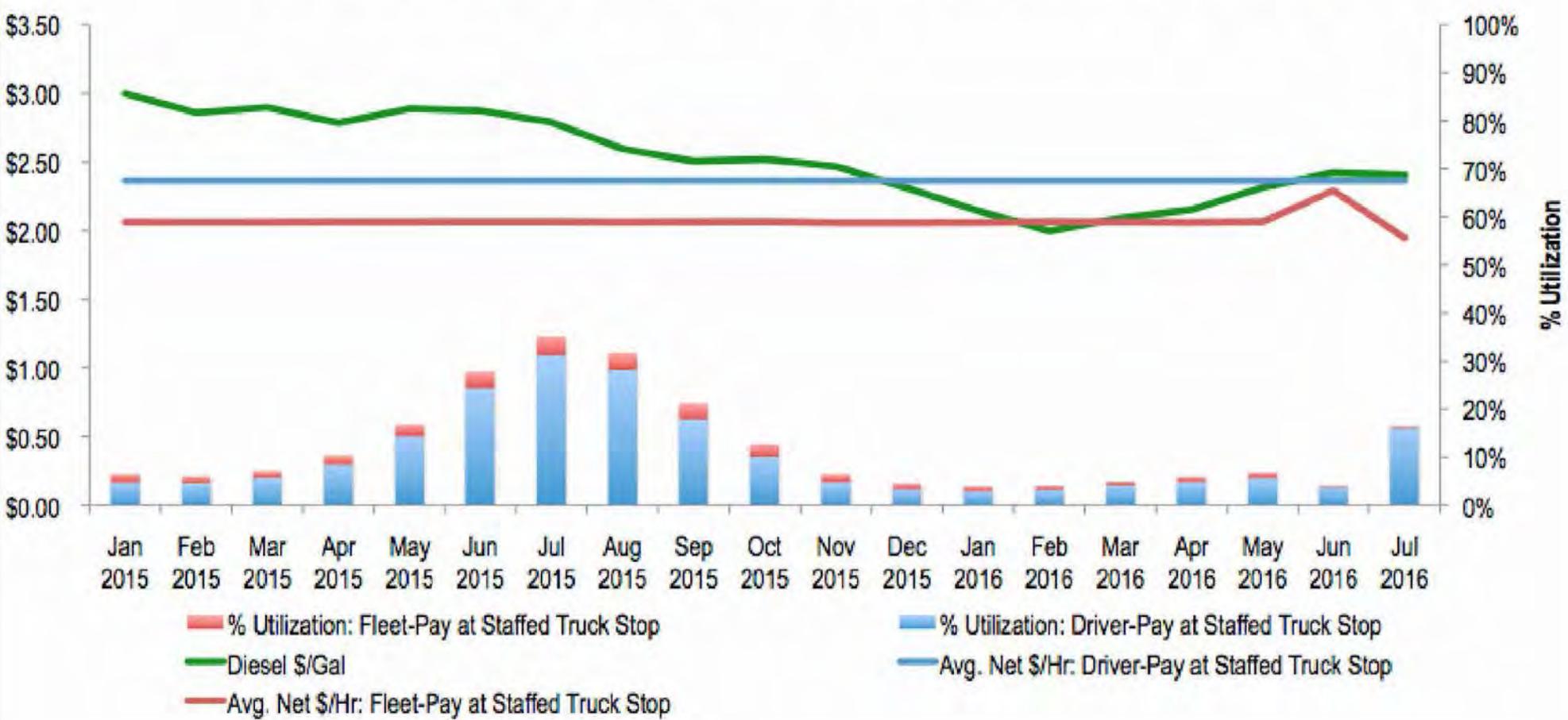
The median cost-effectiveness estimates for the range of scenarios for idle reduction strategies are presented in Table 21 below:

Table 21. Median Cost-Effectiveness Estimates (Dollars per Ton) – Idle Reduction Projects.

Pollutant	Cost-Effectiveness
PM _{2.5}	\$76,342
PM ₁₀	\$51,139
CO	\$20,724
NO _x	\$2,040
VOCs	\$122,587

APPENDIX E

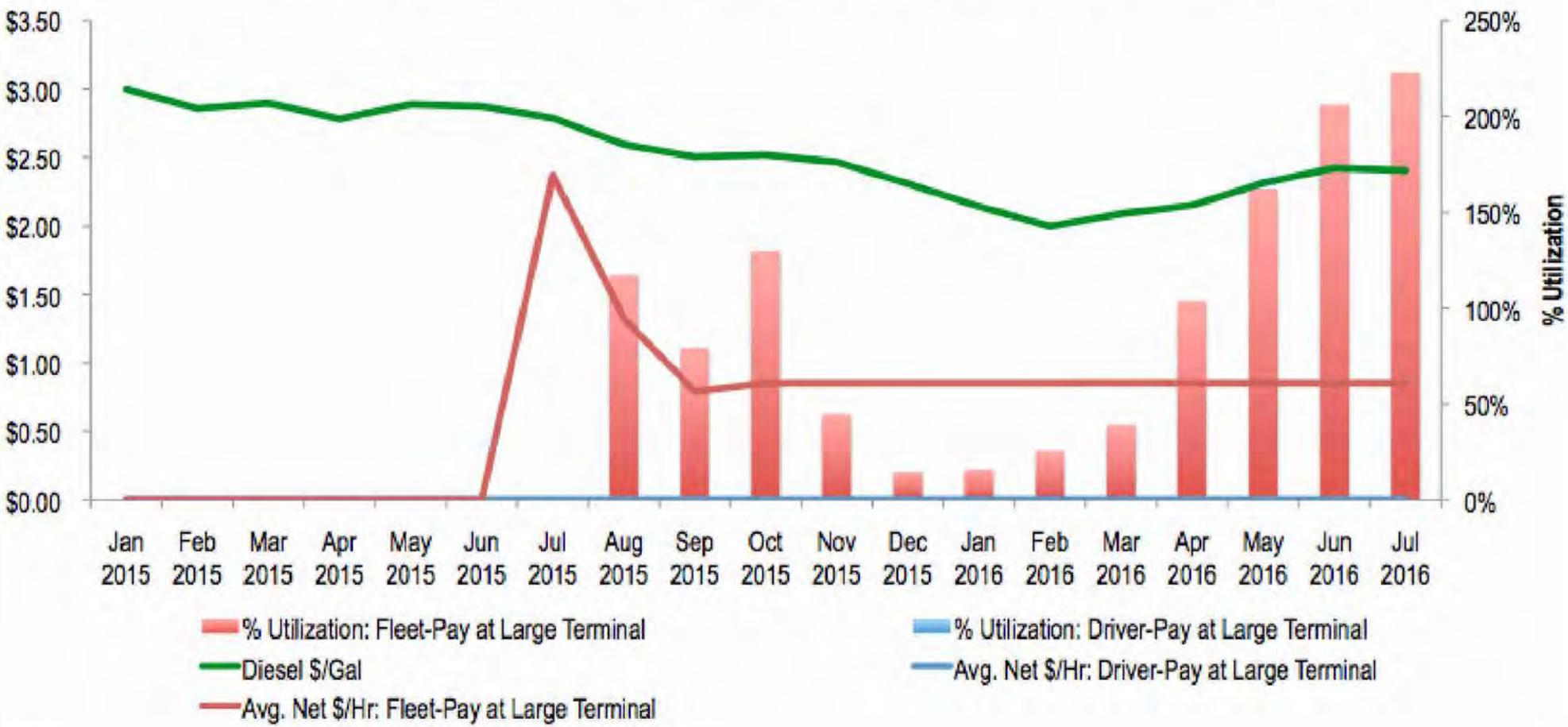
IDLEAIR STAFFED TRUCK STOPS: Utilization (Hours Used as a % of 10 hrs/day for 30 days a month for # of Spaces)



IDLEAIR LARGE TERMINALS: Utilization (Hours Used as a % of 10 hrs/day for 30 days a month for # of Spaces)



IDLEAIR LOW-PRICE TERMINAL: Utilization (Hours Used as a % of 10 hrs/day for 30 days a month for # of Spaces)





OFFICE OF THE ATTORNEY GENERAL
STATE OF ILLINOIS

Lisa Madigan
ATTORNEY GENERAL

August 5, 2016

VIA ELECTRONIC MAIL

John C. Cruden
Assistant Attorney General
U.S. Department of Justice
Environmental and Natural Resources Division
P.O. Box 7611
Washington, DC 20044-7611
Email: pubcomment-ees.enrd@usdoj.gov

Re: Comments on the proposed partial consent decree in *In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation*, Case No: MDL No. 2672 CRB (JSC), and D.J. Ref. No. 90-5-2-1-11386

Dear Mr. Cruden:

The Office of the Illinois Attorney General provides these comments on the proposed partial consent decree ("PCD") in the above-referenced case.¹ Although we support this important settlement, we write to urge the United States to revise Appendix D (Form of Environmental Mitigation Trust Agreement).² Having \$2.7 billion available for air pollution reduction activities is a significant achievement. These comments are intended to help ensure that states can effectively use the funds and are not unintentionally hindered by restrictions, requirements, or deadlines that could be adjusted prior to finalizing the consent decree.

¹ A copy of the PCD is available at:

https://www.justice.gov/sites/default/files/enrd/pages/attachments/2016/06/28/vw_partial_21_cd_and_appendices_docketed.pdf

² Although the Mitigation Trust Agreement can be modified through a process set forth in the PCD, see App. D, page 21-22, the changes suggested in this letter should be made now while the consent decree is lodged with the court instead of waiting to potentially address the issues at some unknown point in the future.

1. The list of eligible projects should be broader.

The environmental mitigation fund's initial allocation for Illinois is in excess of \$97 million. *See* PCD, App. D-1, page 1. This is a large amount of funding that can be used for important air pollution reduction activities and programs to benefit Illinois residents and the environment.

Yet, only certain projects are eligible, restricted to a list set forth in the PCD. *See* App. D-2. To ensure that the mitigation trust fulfills its intent of allocating environmental remediation funds to the states, we urge the United States to broaden the list of eligible projects.

Specifically, a category should be added for non-road vehicles and equipment. This category could be defined to include non-road equipment and vehicles for construction, agriculture, mining, and other heavy industrial applications. Other additions, whether in the same category or on their own, should include truck stop electrification, cargo-handling equipment, and yard trucks.

In addition, with respect to locomotives, the PCD currently only includes freight switcher locomotives among the list of eligible projects. App. D-2, page 3. The United States should include commuter rail locomotives as a category because these engines can also have negative effects on local air quality.³

Also, the PCD allows beneficiaries to use trust funds for activities under the Diesel Emission Reduction Act ("DERA"). App. D-2, page 9. It is unclear why a similar option has not been provided for the Congestion Mitigation and Air Quality Improvement Program ("CMAQ").⁴ The United States should include CMAQ in the list of eligible activities, or else articulate why the program is not being included as an option under the trust fund.

Finally, a mechanism should be added for states to propose new categories of eligible mitigation actions in the future. The trustee could review these proposals and add them to the list. Additionally, states should also be able to submit specific individual proposals to the trustee even if they do not fit within a category, but with the understanding that they must meet criteria, such as achieving NO_x reductions, in order to be approved.

2. States should be able to spend more on Light Duty Zero Emission Vehicle Supply Equipment projects, and the category should include incentives to purchase light duty zero emission vehicles.

The PCD states that "[e]ach 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." App. D-2, page 8. Our office supports the inclusion of this category of eligible mitigation actions. The

³ *See, e.g.*, "EPA Testing Finds Dirty Air on Union Station Platforms," *Chicago Tribune*, 9 November 2015, available at: <http://www.chicagotribune.com/news/watchdog/ct-union-station-air-testing-met-20151105-story.html>.

⁴ General information on the CMAQ Program is available at: http://www.fhwa.dot.gov/environment/air_quality/cmaq/

Illinois General Assembly has found that “adoption and use of electric vehicles would benefit the State of Illinois by,” among other things, “improving the health and environmental quality of the residents of Illinois through reduced pollution.” 20 ILCS 627/5. However, we urge the United States to increase the funding cap to 25 percent and to also expand the category to include incentives to purchase light duty zero emission vehicles, such as customer rebates, tax credits, and reduced license fees.

3. The PCD should include a definition of “Ferries” and “Tugs” to include certain river-going vessels.

The PCD includes a definition section, or glossary of terms, in Appendix D-2 (page 10-11). A definition should be added for “Ferries” and “Tugs” that includes river barge towboats or tugs and large diesel-powered river cruise boats.

4. States should have another opportunity to opt-in as a beneficiary beyond the 60 day cut-off.

The PCD requires states to submit a certification form no later than 60 days after the trust’s effective date in order to become a beneficiary. *See* App. D, page 10 (paragraph 4.0). If a state does not submit the form by that time, the state is “permanently enjoined from asserting any rights with respect to the Trust Assets or any other matter relating to the implementation of this Trust.” *Id.* It appears that this language means that a state has only the 60 day window following the trust’s effective date to choose to become a beneficiary, after which it is forever barred from participating.

The United States should revise paragraph 4.0 to allow at least a second opportunity, or a second “round,” for states to opt into the trust as a beneficiary. Perhaps three or four years into the trust, circumstances may have changed for a particular state. Permanently barring the state from a 10 to 15 year trust based on a decision made 60 days after having access to final documents seems like a harsh result. Logistically, there could be an allocation set-aside for states who find themselves in this situation—it would be fair for this set-aside, or reserve, to be set at a lower amount than the combined total of allocations for the initial non-certifying states. Then, whatever amount is not claimed at the second opt-in round could be distributed to the other beneficiary states proportionally.

5. States should have more time to develop the beneficiary plans.

Pursuant to paragraph 4.1 of the PCD, states should be given at least 60 to 90 days, rather than 30, to provide their beneficiary mitigation plans. Thirty days is a very quick timeline following the certification process and the trustee’s submittal of the list of beneficiaries to the court. States that complete their mitigation plans earlier than 60-90 days are of course free to submit them and begin requesting funds from the trust.

6. States should be able to seek reimbursement for costs of developing the beneficiary plans and be able to contract with consultants or non-profit organizations as part of the process.

The PCD should provide that states can submit a request for reimbursement of the costs needed to develop the beneficiary mitigation plan. Additionally, states and lead agencies should be able to retain consultants or provide grants to non-profit organizations to assist with preparation of the beneficiary mitigation plans and to seek reimbursement of these costs as well.

7. States should be able to request an overall administrative cost recovery not just for individual actions or projects.

The PCD would allow states to use trust funds for certain administrative expenditures associated with implementing mitigation actions.⁵ *See* App. D-2, page 10. However, there is no provision for the overall management and administration of the state's participation in the trust. This is likely to be a significant undertaking that would require at least one, possibly multiple, full-time equivalents ("FTE"). Additionally, specific projects may require legislative or regulatory adjustments in order to proceed, which in turn require agency staff resources to accomplish. Thus, states should be able to submit overall program costs as one overall funding request on an annual basis instead of parceling it out across multiple projects.

8. The PCD should clarify that fund disbursements can be provided directly to third parties.

The PCD states that beneficiaries will provide written instructions to the trustee for the disbursement of funds for approved projects. *See* App. D, page 18. The United States should clarify in subparagraph 5.2.15.1 or elsewhere in the PCD that funds may be disbursed directly from the trustee to a third party, such as a vendor or a non-profit organization, if that is what the beneficiary instructs the trustee to do.

9. The hourly rate for the trustee should be capped at a reasonable amount.

Paragraph 3.6 states in part: "The Trustees also shall be entitled to receive reasonable compensation for services rendered on behalf of the Mitigation Trust, in accordance with the projected annual budgets for administration of the Mitigation Trust required under subparagraph 3.3.1.3 hereof, not to exceed (\$[]) per hour." Although paragraph 3.6 goes on to state that an overall cap on administrative costs under paragraph 1.8 will still apply, we suggest that the final consent decree provide, as it states, a reasonable hourly rate that the trustee shall not exceed. We suggest a number in the range of \$300 to \$500 an hour.

10. Paragraph 3.7 needs to include a process for removal of the trustee.

The heading of paragraph 3.7 of the PCD is "termination, resignation, and removal" of the trustee. *See* App. D, page 10. Termination of duties at the conclusion of the trust is discussed in

⁵ The United States should consider allowing the trustee to approve administrative expenses, including indirect costs, greater than 10 percent if the beneficiary can show that a particular project requires it.

subparagraph 3.7.1—as is resignation and successor trustee in subparagraph 3.7.2. *Id.* There is no discussion of a removal process for the trustee. The United States should include in the final consent decree a new Section 3.7.3 that would address removal.

* * * *

The Illinois Attorney General's Office appreciates the opportunity to comment on this important matter and urges the United States to revise the proposed partial consent decree as set forth above.

Sincerely,



JAMES P. GIGNAC
Environmental and Energy Counsel
Illinois Attorney General's Office
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(312) 814-0660
jgignac@atg.state.il.us



August 5, 2016

Assistant Attorney General
U.S. DOJ—ENRD
P.O. Box 7611
Washington, D.C. 20044-7611.

Dear Sir or Madam,

Thank you for the opportunity to comment on the settlement with Volkswagen.

I urge you to consider using a large portion of the funds to replace older diesel schoolbuses still on the roads in the United States. These buses both pollute the environment and undermine the health of the children who ride them. A major campaign to upgrade these buses will (1) help the environment; (2) reduce childhood asthma, and (3) promote educational achievement.

Attached is an op/ed that I co-authored in the *New York Times* making the case for this type of investment.

Thank you for your consideration. Please let me know if I can provide additional information.

Sincerely,

A handwritten signature in black ink that reads "Joshua M. Sharfstein". The signature is written in a cursive, flowing style.

Joshua M. Sharfstein, M.D.

Professor of the Practice
Associate Dean for Public Health Practice and Training



The Opinion Pages | OP-ED CONTRIBUTORS
Dirty School Buses, Sick Kids

By JOSHUA M. SHARFSTEIN and FRANCES PHILLIPS

JAN. 8, 2016

AS former state public health officials in Maryland, we were quite embarrassed and angry to learn that we had been driving around in little pollution factories, otherwise known as Volkswagen diesels. At the same time, we understand that the car owners are not the only victims of the company's deceptions. To make right by the environment and those harmed by air pollution, Volkswagen should stop sending us apologies — and should start replacing thousands of old school buses across the country.

As with the polluting cars, old school buses run on diesel fuel and emit a toxic mix of gases, including the nitrogen oxides associated with asthma, exacerbations of lung disease, and premature death. That's where the idea of replacing old school buses comes in. Volkswagen faces potentially \$20 billion in fines under the Clean Air Act in a lawsuit filed by the Environmental Protection Agency (not to mention potential liability in lawsuits brought by various states). Directing a portion of these resources into cleaning up the machines that take our children to and from school every day would help make matters right.

In addition to polluting the air, the diesel exhaust seeps into the bus cabin, directly sickening children. A California study published in 2001 found that the level of diesel exhaust in old school buses was up to four times greater than in cars, and up to eight times greater than the statewide average air level. According to the E.P.A., "older, more polluting school buses can lead to significant health risks for students who typically ride these buses for one-half to two hours a day."

Replace these buses, and children's health improves. In a study published last June, researchers at the Universities of Michigan and Wisconsin reported finding that having cleaner air on school buses led to improved lung capacity and substantial reductions in absenteeism, particularly among children with asthma.

By replacing old school buses, in addition to fixing the affected cars, Volkswagen can make up for the damage it did to the environment and improve the lives of many thousands of children in the process. Eventually, the company would be able to say that

Department of Health Policy and Management

624 North Broadway Hampton House, room 493 Baltimore, MD 21205 <http://www.jhsph.edu/departments/health-policy-and-management>



its net impact on air pollution in the United States, at least as measured by nitrogen oxides, was actually negative.

With help from Kirsten Koehler, an assistant professor at the Johns Hopkins Bloomberg School of Public Health, we did the math. In September, the E.P.A. directed Volkswagen to recall around 480,000 polluting diesel cars, each of which produces roughly between 10 and 40 times more nitrogen oxides than allowed. The cumulative impact of the Volkswagen deception has been estimated at about 46,000 tons since 2008.

We estimate there are about 250,000 school buses still on the road that were manufactured before stringent emissions regulations took effect in 2007. Using the E.P.A.'s diesel emissions quantifier, we calculated that replacing one in 10 of these buses, a total of 25,000, would save about 5,000 excess tons of pollution in the first year, and the benefits would continue as long as the buses were on the road. In fact, replacing 25,000 old school buses would eventually make up for the cumulative total of 46,000 excess tons of nitrogen oxides from the polluting Volkswagens.

With a new school bus costing about \$80,000, this bus-replacement effort would run Volkswagen about \$2 billion, around 10 percent of its potential federal liability. We would welcome the company's replacing even more old buses.

With authorization from Congress, the company could simply write a check to the E.P.A., which already runs a program under the Diesel Emissions Reduction Act that helps local governments retrofit or upgrade their fleets. This program is in desperate need of greater investment. The E.P.A. recently announced just over \$7 million in grants to fix or replace buses in 85 localities, a small fraction of the applications. The program has the capacity to give out much more to support school districts across the country.

Because of the diffuse nature of environmental pollution, it's hard to point to a specific individual and conclude that a Volkswagen car caused his or her asthma attack. But it wouldn't be hard to find thousands of schoolchildren who would benefit from new school buses. As the air pollution expert Dr. Robert J. Laumbach of the Robert Wood Johnson Medical School in New Jersey recently wrote, "Efforts to clean up diesel engine emissions from school buses are likely to have tremendous societal benefits."

Linking the Volkswagen scandal to the replacement of old school buses would also make the larger point that there are opportunities all around us to clean up our air and protect our health.

Department of Health Policy and Management

624 North Broadway Hampton House, room 493 Baltimore, MD 21205 <http://www.jhsph.edu/departments/health-policy-and-management>



As owners of diesel-powered VW's, we're not looking for big payouts. But we do care about justice. Volkswagen's global chief is expected to meet with top E.P.A. officials next week to discuss the recall of the diesel vehicles built with software to evade emissions tests. Perhaps the agency can add our proposal to the topics up for discussion.

If Volkswagen doesn't step up voluntarily and accept the corporate responsibility that fits the evidence, forcing the company to pay to replace a large number of old school buses strikes us as a punishment that fits the crime.

Joshua M. Sharfstein is associate dean for public health practice and training, and Frances Phillips is an associate in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health.

Department of Health Policy and Management

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STATE OF KANSAS
OFFICE OF THE ATTORNEY GENERAL
CONSUMER PROTECTION AND ANTITRUST DIVISION

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August 5, 2016

Assistant Attorney General John C. Cruden
U.S. DOJ-ENRD
P.O. Box 7611
Washington, D.C. 20044-7611

Sent via email (Pubcomment-ees.enrd@usdoj.gov)

Re: Public Comment on proposed Partial Consent Decree, *In re: Volkswagen "Clean Diesel" Marketing, Sales Practices, and Products Liability Litigation*, Case No: MDL No. 2672 CRB (JSC); D.J. Ref. No. 90-5-2-1-11386

Dear Assistant Attorney General Cruden:

As Attorney General for the State of Kansas, I submit the following comments on the above-referenced Partial Consent Decree (the "Consent Decree") which the United States lodged on June 28, 2016.

By submitting these comments on the Consent Decree, the State of Kansas does not consent to the jurisdiction of the federal courts for any purpose. Nor should these comments be interpreted to waive any rights of the State of Kansas to pursue relief in any form against Volkswagen AG, Audi AG, Volkswagen Group of America, Inc., Volkswagen Group of America Chattanooga Operations, LLC, Dr. Ing h.c. F. Porsche AG and Porsche Cars North America, Inc. (collectively "Volkswagen").

These comments primarily concern Appendixes D and D-2 of the Consent Decree entitled Form of Environmental Mitigation Trust Agreement and Eligible Mitigation Actions and Mitigation Action Expenditures respectively. These sections of the Consent Decree particularly affect the States as they provide for establishment of a trust to which the States are potential Beneficiaries. The trust is intended to fully mitigate the lifetime excess emissions of nitrogen oxides (NOx) from unlawful Volkswagen 2.0 liter vehicles. Under the terms of the Consent Decree and the trust agreement, States must devise plans to achieve mitigation of excess NOx emissions from these vehicles.

The health, safety and welfare of the States' citizens and environment is of the utmost concern to all States. As such, we propose the following changes to ensure that the trust set up under the

Consent Decree is used to its utmost benefit by each State and achieves its purpose of mitigating the effects of NOx in each State.

I. Request for Expansion of the Trust Purpose to Encompass Actual Harm

The Trust Purpose laid out in Appendix D on page is described as

...to fund Eligible Mitigation Actions to be proposed and administered by the Beneficiaries subject to the requirements of the Consent Decree and this Trust Agreement. *The goal of each Eligible Mitigation Action shall be to achieve reductions of NOx emissions in the United States.*

[emphasis added]. While we acknowledge that reduction of future NOx emissions is important, we strongly encourage you to expand the goal and purpose of the trust to address the harm NOx emissions have already wrought. The unlawful 2.0 liter vehicles at issue have been emitting excessive NOx emissions since their introduction in 2009. Harm has already occurred to the citizens and the environment of the United States as a result of these emissions. Thus, we recommend that the goal of the Eligible Mitigation Action be expanded to include both reduction and actual mitigation of the harm from excess NOx emissions as follows:

The goal of each Eligible Mitigation Action shall be to achieve reductions of NOx emissions in the United States *or to repair and reduce the effects of NOx emissions in the United States.*

In this way, the harm that has already occurred from excess NOx emissions may be addressed in conjunction with the future reduction of NOx emissions.

II. Requests for Broadening of Eligible Mitigation Actions and Expenditure

A. Add a New Category for Energy Efficiency Programs

The State of Kansas requests that an additional category be added to the available Eligible Mitigation Actions to encompass energy efficiency programs. The Environmental Protection Agency (EPA) is already engaged in attempts to encourage and assist states and local utilities to invest in energy efficiency programs in urban areas. As urban areas have been most severely affected by the effects of excess NOx emissions, it is vital that funding be allocated in ways that assist this most affected population.

The increase in NOx emissions and their long-term effects will have a disparate effect on low-income households whose residences do not have these energy efficiency features. Energy efficiency programs reduce power consumption by installing items like home insulation or double pane windows in traditionally low income housing, resulting in NOx and sulfur oxides (SOx) emission reductions. By expanding available categories to include energy efficiency programs, the trust would have an immediate impact on reducing citizens' exposure to the harmful effects of excessive NOx emissions. This would be similar to the impact of the vehicle

replacement programs already on the approvable action expenditure list and would continue to have future positive impact on the citizens of the States in which it is implemented.

B. Expand Eligible Vehicles to Include Small Vehicles

The current list of categories of Eligible Mitigation Actions is restricted to the replacement of larger vehicles. The States and their citizens would receive greater benefit if the list were expanded to include everyday vehicles, such as vans or sedans. This would broaden the States' ability to target the most prevalent problem vehicles in their States and achieve the largest possible reduction of excess NOx emissions. Replacing or repowering these vehicles which are in widespread and frequent use would increase the States' ability to effectively and more broadly accomplish the goal of reducing NOx emissions.

C. Add Projects to Reduce Delay-Induced Emissions as an Eligible Mitigation Action

There are numerous construction projects that could be undertaken to reduce diesel emissions that result from unnecessary delays which cause diesel vehicles to spend more time on the road. A few examples of such projects are construction of passing lanes on two-lane roadways, increasing load on bridges to reduce use of alternative routes and multiple trips, and freight corridors that bypass towns to reduce speed changes. These construction projects would reduce the emission of NOx in all vehicles using the affected roadways and thus could have greater long term potential effects on NOx reduction.

D. Expand Eligible Vehicles to Include Diesel Engine Road Construction and Maintenance Equipment

We request that an additional or expanded category be added to the Eligible Mitigation Actions to cover diesel-engine powered road construction and maintenance equipment, such as excavators, wheel loaders, mowing tractors, and pavement millers. This diesel-powered equipment is necessary to perform important construction and maintenance functions and in somewhat continuous use as a result. Therefore, it is a significant source of NOx emissions that could be addressed by the trust.

The State of Kansas appreciates the opportunity to submit these comments to the DOJ and EPA for consideration and respectfully request that DOJ make the suggested changes prior to moving for final entry of the Consent Decree. Thank you.

Respectfully submitted,

A handwritten signature in black ink that reads "Derek Schmidt". The signature is written in a cursive, slightly slanted style.

DEREK SCHMIDT
Attorney General of Kansas



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
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ENERGY AND ENVIRONMENT CABINET

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R. BRUCE SCOTT
DEPUTY SECRETARY

August 2, 2016

Assistant Attorney General
U.S. DOJ – ENRD
P.O. Box 7611
Washington, D.C. 20044-7611

Re: Volkswagen “Clean Diesel” Marketing, Sales Practices,
and Products Liability Litigation, Case No: 2672 CRB (JSC)
D.J. Ref. No. 90-5-2-1-11386

Dear Sir/Madam:

Under the Clean Air Act, the Energy and Environment Cabinet (Cabinet) is responsible for preventing air pollution and developing implementation plans to meet the National Ambient Air Quality Standards for the Commonwealth of Kentucky. As such, the Cabinet shares the Department of Justice’s (DOJ’s) concern about Volkswagen’s (VW’s) alleged violations of federal and state laws by purposefully employing prohibited “defeat devices” in its vehicles that resulted in excess nitrogen oxide (NO_x) emissions over a period of several years. In response to the July 6, 2016 *Federal Register* notice soliciting comments on the “Volkswagen Clean Diesel Marketing, Sales Practices, and Products Liability Litigation,”¹ the Cabinet respectfully submits the following comments.

The Cabinet applauds the DOJ for recognizing the seriousness of these alleged violations and for proposing in its partial Consent Decree a program that requires VW to mitigate excess NO_x emissions from Subject Vehicles. By achieving emissions reductions that offset excess emissions in the past and the future as a result of the alleged violations, the Cabinet finds that the proposed mitigation actions will lead to improved air quality. Furthermore, the Cabinet supports the proposal to require VW to place additional funds into the mitigation trust if the required percentage of affected vehicles are not recalled.

NO_x mitigation projects have the added benefit of reducing regional ozone pollution, since NO_x is a significant contributor to secondary ozone formation. Therefore, the Cabinet encourages DOJ to provide flexibility in allowing NO_x mitigation projects throughout the states, not just in nonattainment areas.

¹ 81 FR 44051

Assistant Attorney General

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The Cabinet supports the inclusion of each of the nine categories of Eligible Mitigation Actions, but is concerned that the list may exclude projects that could provide valuable and tangible emissions reductions. The Cabinet encourages the DOJ to consider flexibility in determining eligible NO_x mitigation projects to be funded. One way to do this would be to include an additional category that provides for Mitigation actions that fall outside these categories and which can be demonstrated to reduce NO_x emissions. For example, local governments might use funds to replace aging, diesel-powered water treatment plant pumps, which produce significant NO_x emissions that impact local communities.

Furthermore, the Cabinet supports the inclusion of Light Duty Zero Emission Vehicle (ZEV) Supply Equipment in the list of Eligible Mitigation Actions. However, the Cabinet is concerned that the 15 percent cap is too restrictive. The Cabinet recommends that this cap be removed. Additionally, the Cabinet supports the proposal that VW invest in ZEV technology and infrastructure and encourages consideration of projects that extend the range of ZEVs, such as rest area charging stations.

As proposed, the Consent Decree provides only 30 days for Beneficiaries to submit a plan that outlines how the allotted mitigation funds will be used. The Cabinet is concerned with the short amount of time allowed to Beneficiaries to submit Beneficiary Mitigation Plans. State and local government approval of such plans may be required for agencies, which could require additional time beyond 30 days. The Cabinet suggests 60-90 days as a more reasonable length of time for preparing and submitting Beneficiary Mitigation Plans.

The proposed Consent Decree limits the amount of funding a beneficiary can request payout for during the first three years after the Settling Defendants make the Initial Deposit. The Cabinet suggests consideration of the fund as a whole and not only the amount taken by one beneficiary after the first year. If one beneficiary does not draw down its entire one-third in the first year, other beneficiaries should be able to draw down the remainder of the first installment of the Initial Deposit as soon as it is available up to the amount they have been allocated.

Additionally, Appendix D, IV – 4.1(iv) requires a general description by the beneficiary, of the expected/anticipated emission benefits the beneficiary estimates would be realized by the implementation of the Eligible Mitigation Actions identified under the Beneficiary Mitigation Plan. It may be helpful for the trustee and beneficiaries in each state to have model estimations of the types of benefits available from the list of categories available. Providing a calculation tool to help Beneficiaries estimate emission reductions would make it easier for Beneficiaries to report reductions in a consistent and accurate manner.

Regarding implementation, it is important for Beneficiaries to have a clear understanding of reporting obligations with regards to mitigation actions. The Cabinet encourages the DOJ to provide a more detailed description and explanation of the Beneficiary Reporting Obligations. The Cabinet also requests guidance on the public input states need to solicit, and when and how this input must be gathered and considered.

Assistant Attorney General

Page 3

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Projects that include the installation of air pollution control technology face the possibility of unintended consequences, such as poor performance or incompatibility. Guidance regarding the lack of performance of the air pollution control technology and the process for deactivation or uninstalling the control equipment would be beneficial. The Cabinet encourages DOJ to consider this possibility in its final Decree.

In conclusion, the Cabinet appreciates this opportunity to provide comment and input in the proposed partial Consent Decree. If you have any questions or need clarification regarding the Cabinet's comments, please contact Ms. Lona Brewer of the Energy and Environment Cabinet or Ms. Roberta Burnes of the Division for Air Quality at lona.brewer@ky.gov or roberta.burnes@ky.gov, respectively.

Sincerely,



Charles G. Snavely
Secretary

From: Kindberg, Lee B
To: ENRD, PUBCOMMENT-EES (ENRD)
Sent: 8/3/2016 11:53:35 AM
Subject: VW settlement Appendices D1 & D2 - Eligibility - Please clarify

Thank you for this opportunity to comment on the Draft Volkswagen 2 liter engine settlement. These comments and suggestions on the VW settlement plan were also submitted to EPA, and their website constraints limited us to 2000 characters. We would be happy to provide further information on any of these issues, or to participate in a workshop or otherwise assist beneficiaries or EPA in reduction strategy development. My contact information is below.

1. Appendix D1 shows 100% allocated. Have you considered retaining some portion in a centralized account to fund multi-state projects and interstate or international mobile sources?
2. Please clarify eligibility under D2 (particularly item 10). Clearer language will enable industry to assist states and tribes to suggest reduction opportunities for the reduction strategies.
3. Port-related mobile sources (OGV, cranes, cargo handling equipment, gensets) present significant NOx reduction opportunities. Please clarify the opportunities for port-related operators to participate. E.g., D2 and the FAQ seem to limit funding to smaller vessels, but larger vessels may be more cost-effective.
4. D2 item 5 OGV Shorepower appears to limit funding to shore-side infrastructure. However, without equipped vessels, no reductions can be achieved. Please consider funding vessel shorepower equipment.
5. D2 item 5 states that "Components... are limited to cables, cable management systems, shorepower coupler systems..." The cables, cable management systems and connectors for many container vessels are on the vessels, and are not part of shore-side infrastructure. A minority have cable management systems that are stored on the dock and lifted onto the vessels on arrival. These installations may require longer to connect, so result in less NOx reduction. Please clarify eligibility for on-vessel or lift-on components.
6. Would item 8.a "forklifts with greater than 8000 pounds lift capacity" include cargo handling equipment such as sideloaders, toppicks or RTGs at marine terminals and railyards?
7. Are verifiable operational incentive programs (e.g. vessel speed reductions, low-NOx vessel incentives) eligible? These have been extremely effective in a number of US ports and can often be implemented more quickly than programs requiring equipment modifications.

Thank you again for this opportunity to comment.

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