Electric Vehicles &
The Volkswagen Settlement

Introductions by: Gina Coplon-Newfield
Director of Sierra Club’s Electric Vehicle Initiative

Presented by: Katherine Clements
Sierra Club’s Environmental Law Program

Additional Q&A Participants:
Josh Stebbins, Mary Lunetta
To begin,
this is a lot of money.
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<th>Amount</th>
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Now that I have your attention…
Let’s begin.
The VW Settlement supports programs transitioning states towards electric vehicles, including...

- EV Charging Stations
- Zero Emission Buses
- Electric Ports

...and more!
However...
The VW Settlement can also fund programs supporting diesel and alternate-fueled vehicles.
So here is the BIG question.
The Main Question:

$2.7 billion for diesel and natural gas programming?

- OR -

$2.7 billion for electric transportation?

A: Let’s Drive Electric!
Why push electric?
(4) Reasons.
Electric saves money...

Electric saves money... and is only getting cheaper!

(2) EVs Create In-State Jobs.


Source: Authors’ estimates.
Note: Results are changes from Baseline values in 2030. Jobs in 1,000s of FTE workers.
(3)

EVs keep oil money in-state.

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<th>State</th>
<th>$ Spent - Transportation Petroleum</th>
<th>State</th>
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Source: U.S. Energy Information Administration (EIA), Transportation Sector Energy Expenditure Estimates, 2014 (Million Dollars)
Electric Eliminates NOx, PM, CO$_2$
Tailpipe Emissions
LET’S ELECTRIFY!
That’s the big picture for today.
Let’s dive in a little deeper...
Presentation Roadmap:

The Main Question

Background
- The Cheating Scandal
- The Importance of NOx Reductions

Overview of the VW Settlement
- Money and How It Can Be Used
- Important dates and deadlines

Stakeholder Engagement Opportunities
- Ways to engage
- Tools to engage

Questions welcomed at the end!
West Virginia University Tested VWs On The Road

Figure 3.21: Vehicle A instrumentation setup

West Virginia University, Center for Alternative Fuels Engines and Emissions (CAFEED)

15 – 35X the EPA Standard

Figure 4.3: Average NOx emissions of test vehicles over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, ‘R’ designates routes including a test with DPF regeneration event, ‘nd’ - no data available

VW vehicles

VW emission cheating scandal spreads to more vehicles

Volkswagen Busted For Cheating On Diesel Models -- And Owners Won't Like The Probable 'Fix'

The U.S. Environmental Protection Agency today announced it will force Volkswagen to fix nearly a half million of its popular “TDI” diesel engine vehicles sold in the U.S. since 2009 because the agency discovered VW had installed clever software that turned on all the engine’s emissions control systems only during emissions testing.

Under normal driving conditions, the software, which is known as a “defeat device,” enabled the diesel engines to spew out levels of pollutants that exceeded federal standards, the EPA determined.
VW Setstle Dieselgate For $15 Billion

David Kiley, CONTRIBUTOR

Volkswagen AG will spend up to $14.7 billion in the U.S. to put its diesel scandal behind it in settlements reached with government regulators and plaintiffs lawyers.
Why Do We Care About NOx?

(NOx = nitrogen oxides)
Why Do We Care About NOx?

1. Public Health and Environmental Impacts

2. Environmental Justice
Why Do We Care?

- Environmental Impacts
- Health Impacts
- Environmental Justice
Worth keeping in mind...

Worldwide: Approximately 11 Million Cars

United States: 487,532 Cars

Number of VW Cars Sold with Cheating Technology
Presentation Roadmap:

The Main Question

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- Tools to engage

Questions welcomed at the end!
Where are we now?
October 25th, 2016

Final approval of the Volkswagen Settlement

$14.7 billion dollars under the Volkswagen Settlement?
VW Settlement Funds

$10.03 BILLION
Vehicle Buyback & Modification Programs

$2 BILLION
ZEV Investment Commitment

$2.7 BILLION
Environmental Mitigation Trust
VW Settlement Funds

$10.03 BILLION

Vehicle Buyback & Modification Programs

$2 BILLION

ZEV Investment Commitment

$2.7 BILLION

Environmental Mitigation Trust
Diving even deeper...

Environmental Mitigation Trust
($2.7 Billion)
How can this money be spent?

*aka the “Eligible Mitigation Actions”*
Environmental Mitigation Trust
($2.7 Billion)

15% of the money can be used to...
Environmental Mitigation Trust
($2.7 Billion)


Charging Infrastructure for Passenger Vehicles
Why Invest in EV Charging Infrastructure?

1. Increase in-state jobs
Why Invest in EV Charging Infrastructure?

1. Increase in-state jobs
2. Reduce $$ sent out-of-state for petroleum
Why Invest in EV Charging Infrastructure?

1. Increase in-state jobs
2. Reduce $$ sent out-of-state for petroleum
3. Filling critical market gaps will increase public access and interest in EVs
And how much of this gets covered?
Environmental Mitigation Trust
($2.7 Billion)

EV Charging Equipment

Hydrogen Fuel Cell Equipment

% Costs Covered

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<th>Public Property</th>
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% Costs Covered

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<th>Public - 250 kg/day</th>
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How else can this money be spent?

*aka the “Eligible Mitigation Actions”*
Environmental Mitigation Trust
($2.7 Billion)

(2)
States’ money can also be used for...
Environmental Mitigation Trust ($2.7 Billion)


Large Trucks  Medium Trucks  Transit Buses  School Buses  Drayage

Ocean Vessels  Freight Switchers  Airport Support  Forklifts
Environmental Mitigation Trust ($2.7 Billion)


Large Trucks  Medium Trucks  Transit Buses  School Buses  Drayage

Ocean Vessels  Freight Switchers  Airport Support  Forklifts
Zero-Emission Buses

1000s of ZEBs are already on the road worldwide.

Source: www.proterra.com/products
Zero-Emission Buses

Over the lifetime of the bus, save $$$ on maintenance costs alone.

Source: www.proterra.com/products
All costs considered, zero-emission buses are a worthy, cost-effective, clean investment.

Source: www.proterra.com/products
Zero-Emission School Buses

~ $11,000.00 savings / year

Source: https://cleantechnica.com/2016/08/16/massachusetts-puts-1-4-million-electric-school-bus-pilot-project/
Environmental Mitigation Trust ($2.7 Billion)

Scrapping.  
- Large Trucks
- Medium Trucks
- Transit Buses
- School Buses
- Drayage

Repowering.  
- Ocean Vessels
- Freight Switchers
- Airport Support
- Forklifts

Replacing.
Electrifying Ports

• Ports are incredibly dirty, polluting large amounts of NOx and greenhouse gases

Electrifying Ports

• Ports are incredibly dirty, polluting large amounts of NOx and greenhouse gases
• Low-income communities are most directly impacted by the air pollution emitted from ports
Electrifying Ports

• Ports are incredibly dirty, polluting large amounts of NOx and greenhouse gases

• Low-income communities are most directly impacted by the air pollution emitted from ports

• Options for electrifying ports:
  1. Shore-Ship Power (i.e. “cold ironing”)
  2. Electric Drayage (short haul) Trucks
  3. Forklifts
Environmental Mitigation Trust
($2.7 Billion)

Scraping.

Repowering.

Replacing.

Large Trucks
Medium Trucks
Transit Buses
School Buses
Drayage

Ocean Vessels
Freight Switchers
Airport Support
Forklifts
And how much of these costs get covered?
Environmental Mitigation Trust ($2.7 Billion)

Repowering.

Replacing.

*Any type of Government owned eligible vehicle upgrade is 100% covered.
Environmental Mitigation Trust
($2.7 Billion)

Anything else?

*aka the “Eligible Mitigation Actions”*
Environmental Mitigation Trust
($2.7 Billion)

Yes.
Environmental Mitigation Trust
($2.7 Billion)

(3)
The “DERA Option”
What is DERA?

EPA offers funding for projects that reduce diesel emissions from existing engines.
Environmental Mitigation Trust ($2.7 Billion)

How is this relevant to the settlement?
What is the DERA Option?

This matching money can now come from the Environmental Mitigation Trust ($2.7 Billion)
Environmental Mitigation Trust ($2.7 Billion)

Get to the point.
## DERA Projects 2015

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<td>Replace 36 long haul trucks</td>
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<td>AK</td>
<td>Native Village of Karluk</td>
<td>Replace two stationary diesel generators with certified Tier 3 generators</td>
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<td>Rampart Village Council</td>
<td>Replace two stationary diesel generators with certified Tier 3 generators</td>
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<td>City of Long Beach Harbor Department</td>
<td><strong>Replace eight yard tractors with all-electric automated guided vehicles</strong></td>
<td><strong>$1.21 million</strong></td>
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<td>Gila River Indian Community</td>
<td>Replace four non-road vehicles with newer Tier 4 engine vehicles</td>
<td>$389,000.00</td>
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<td>CA</td>
<td>Sacramento Metropolitan Air Quality</td>
<td>Replace three refuse haulers. Replace up to six agricultural tractors with tractors with Tier 4 engines</td>
<td>$642,734.00</td>
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<td>CA</td>
<td>San Joaquin Valley Unified Air Pollution Control District</td>
<td>Replace 75 agricultural tractors/loaders with new tractors/loaders with Tier 4 engines</td>
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<td>Georgia Ports Authority</td>
<td>Replace 29 drayage trucks</td>
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<td>MA Massachusetts Port Authority</td>
<td>Repower five rubber tired gantry (RTG) cranes with Tier 4 gensets</td>
<td>$333,185.00</td>
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<td>Maryland Environmental Service</td>
<td>Replace 25 drayage trucks</td>
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<td>MI</td>
<td>Southwest Detroit Environmental Vision</td>
<td>Replace 33 tractor trucks</td>
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<td>NM</td>
<td>Pueblo of Acoma</td>
<td>Install 30 truck stop electrification units</td>
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<td>Mecklenburg County</td>
<td>Rebates to replace 16 trucks, 10 nonroad vehicles, and three drayage trucks</td>
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<td>Port Authority of New York &amp; New Jersey</td>
<td>Replace 26 drayage trucks</td>
<td>$1 million</td>
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<td>OR</td>
<td>Metropolitan Contractor Improvement Partnership</td>
<td>Install advanced exhaust controls on 12 construction vehicles. Replace six short haul trucks</td>
<td>$548,326.00</td>
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<td>PA</td>
<td>Pittsburgh Region Clean Cities Inc</td>
<td>Install auxiliary power units (APU) on four diesel locomotives</td>
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<td>Sioux Falls School District</td>
<td>Replace 20 school buses</td>
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<td>VA</td>
<td>James Madison University</td>
<td>Replace one diesel truck with CNG truck; <strong>Install electrified parking spaces (EPS) for 143 reefers</strong></td>
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<td>Makah Tribal Council</td>
<td>Repower six commercial fishing vessels with new propulsion engines</td>
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<td>Replace 51 ground support equipment (GSE) with electric GSE</td>
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<td>Replace one marine engine with a lower emission Tier 3 marine engine</td>
<td>$71,419.00</td>
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Sources: [https://www.epa.gov/cleandiesel/clean-diesel-national-grants#dera2](https://www.epa.gov/cleandiesel/clean-diesel-national-grants#dera2)
Environmental Mitigation Trust
($2.7 Billion)
Environmental Mitigation Trust
($2.7 Billion)

Important Deadlines?
Environmental Mitigation Trust ($2.7 Billion)

**Environmental Mitigation Trust Effective Date (TED) $2.7 Billion**

- **October 2016** – Settlement Effective Date ("ED")
- **Estimated January 2017** – Env. Mitigation Trust Effective Date ("TED")
- **TED + 60 Days** – Deadline for State's submission of Beneficiary Certification
- **TED + 120 Days** – Deadline for Trustee to announce approved Beneficiaries ("Announcement")
- **Announcement + 90** – Deadline to submit Beneficiary Mitigation Plan

**Opportunity for Input**

- **October 2016 - February 2017** – Reach out to State Governors, agencies, & organizations to encourage Beneficiary Certification submission
- **October 2016 - 2017** – Advocate for the state’s Environmental Mitigation Trust funding to go towards programs of interest, e.g. EV road infrastructure, electric buses, electric ports, LDV charging, and environmental justice programs
Applying to be a Beneficiary

Deadline: Your state has 60 Days after the Trust Effective Date (expected early 2017) to submit to the Court the certifications described below

Purpose: Allow a state to designate an agency to be the receiver and distributor of the VW Settlement funds allocated for your state

Checklist:
- Certification Form (Partial Consent Decree Appendix D-3)
- Identification of Lead Agency and Submission to Jurisdiction
- Consent to Trustee Authority
- Certification of Legal Authority
- Certification of Legal Compliance
- Certification of Eligible Mitigation Action Accounts
- Waiver of Claims for Injunctive Relief under Environmental or Common Laws
- Publicly Available Information
- Notice of Availability of Mitigation Action Funds
- Registration of 2.0 Liter Subject Vehicles
Environmental Mitigation Trust ($2.7 Billion)

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Beneficiary Mitigation Plan

Deadline: The State Governor has 90 Days after the Environmental Mitigation Trustee approves a state’s Beneficiary (*anticipated first half of 2017*)

Purpose: To inform the public and the Trustee of the Beneficiary’s plan to use the mitigation funds allocated to it under the Environmental Mitigation Trust

Requirements: The Beneficiary Mitigation Plan must address the following:
- Goal for the funds
- Anticipated program actions
- Action plan to address areas of air quality concern
- Expected ranges of emission benefits
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**Environmental Mitigation Trust**

($2.7 Billion)
Presentation Roadmap:

The Main Question

Background
• The Cheating Scandal
• The Importance of NOx Reductions

Overview of the VW Settlement
• Money and How It Can Be Used
• Important dates and deadlines

Stakeholder Engagement Opportunities
• Ways to engage
• Tools to engage

Questions welcomed at the end!
Ways to Engage

Increase awareness of the funding opportunity and important deadlines

- Coordinate with partner NGOs and allies

- Talk with your state governor and state agencies
  - Available Funding
  - Eligible Programming
  - Important Deadlines

Influence how your state beneficiary allocates the funds*

- Advocate **for** electric vehicle programs, such as:
  - EV infrastructure
  - Zero Emission Buses
  - Electric ports

- Advocate **against** programs that support:
  - Diesel
  - Natural Gas
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VOLKSWAGEN SETTLEMENT

For nearly 500,000 model 2009 – 2016 motor vehicles, Volkswagen knowingly incorporated cheating computer systems that run emissions controls during testing, but do not run during normal vehicle operation. In 2014, an independent research study revealed that the emissions from Volkswagen cars were **15 – 40 times above** the U.S. EPA compliance level.

This is egregious, and the Environmental Protection Agency agreed. In September 2015, the U.S. EPA filed a complaint against Volkswagen (with other parties soon following suit).

Volkswagen agreed to settle by spending up to $14.7 billion to remediate the excess NOx emissions, of which a majority of this money is going to vehicle buyback and modification programs ($10.03 billion) for affected consumers -- but $2.7 billion of this settlement money is going towards NOx reduction programs via the Environmental Mitigation Trust. That means millions of dollars being given to each U.S. state to put toward clean transportation programs.

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Coming soon: recording of 1/4 webinar

http://content.sierraclub.org/evguide/volkswagen-settlement
THE VW SETTLEMENT HANDBOOK: Overview, Timeline, and Actions

What is the VW Settlement?

For nearly 100,000 model 2009–2016 motor vehicles, Volkswagen knowingly incorporated cheating computer systems that reduced emissions controls during testing, but not during normal vehicle operation. The EPA and California’s Air Resources Board determined that the emissions from Volkswagen cars were 35–40 times above the U.S. EPA compliance level. In September 2015, the U.S. AG filed a complaint against Volkswagen, with other parties soon following suit.

In order to settle the allegations of cheating emissions, Volkswagen agreed to pay up to $14.7 billion for remediation of NOX emissions. A majority of the money is going to vehicle buyback and modification programs ($10 billion), which directly provides compensation to owners, and will be distributed by February 2018. The remaining sum, $4.7 billion, is going towards projects for environmental justice, clean air, and new technologies.

Why Do We Care About NOX and Transportation?

NOX (nitrogen oxides), referred to as “NOx,” are precursors to ozone (O3), which is also referred to as “smog.” This means that when NOx are emitted from sources such as gas-fired cars, they produce the ingredients for ozone for hours.

As you may already be aware, ozone is a powerful pollutant that has direct consequences on human and environmental health, frequently at risk from breathing or consuming ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.

Environmental Justice

What you may not be aware of, however, is that ozone pollution is particularly important for environmental justice purposes. Throughout the United States, as air quality decreases, over-representation of people of color increases. As the graph demonstrates, ozone air quality correlates with greater proportions of people of color.

Opportunity for Change

The transportation sector is one of the largest sources of NOX and other greenhouse gas emissions in the United States. In 2018 alone, emissions from the transportation sector accounted for over one-fourth of all greenhouse gas emissions. The funding from this settlement can be used to electrify the transportation sector in every state of the U.S., and eliminate one of our biggest sources of pollution in the country. Nobody will be harmed by healthy air, but it will also mitigate impacts on climate change and improve environmental health.
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Coming soon: recording of 11/4 webinar
# Key Environmental Mitigation Trust Deadlines:

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- **Estimated January 2017 Effective Date ("TED")**:
- **Deadline for Trustee to announce approved Beneficiaries ("Announcement")**: TED + 120 Days
- **Deadline to submit Beneficiary Mitigation Plan**: Announcement + 90 Days
- **Reach out to State Governors, agencies, & organizations to encourage Beneficiary Certification submission**: October 2016 - February 2017
- **Advocate for the state’s Environmental Mitigation Trust funding to go towards programs of interest**: October 2016 - 2017
All Important VW Settlement Deadlines:

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<td>ZEV Investment Commitment</td>
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Coming soon: recording of 11/4 webinar
FAQ: VW Settlement

Q: How much will my state be receiving in allocated funds?
A: That information can be found on page 8 and 9 of the Volkswagen Settlement Guide.

Q: How were state allocation amounts determined?
A: The amount each state will receive is based on the number of registered VW vehicles with cheat devices within that state. States with more of these cars will receive larger funds.

Q: Who can qualify as a beneficiary of the Environmental Mitigation Trust (EMT)?
A: Potential beneficiaries include all 50 states, the District of Columbia, Puerto Rico and federally recognized tribal nations.

Q: Who will be the state lead for dispensing funds?
A: This will vary for each state. The Governor for each state will designate the agency who will receive and then disburse the funds. The settlement agreement refers to this agency as the state “beneficiary.” It could be the Department of Environmental Protection, Department of Transportation, Department of Air Quality, etc.

Q: When is the EMT likely to become effective?
A: The trust will become effective sometime in the first half of 2017. After the Court approves the settlement (expected 10/25/16), a trust must be appointed by the Court within 60-90 days. Then, the trust agreement must be finalized, executed by VW and the trustee, and filed with the Court.

Q: Can the EMT fund a program to reduce Vehicle Miles Traveled (VMT)?
A: Although reducing VMT is a great way to reduce transportation related emissions, it does not qualify for VW Settlement EMT funds. The EMT explicitly outlines the eligible costs, and subway trains, transit oriented development, biking programs, etc. are not included.

Q: Can the EMT fund a rebate program for new EV purchases or leases?
A: No, a state rebate program is not an eligible cost outlined in the settlement agreement.

Q: Are universities that own their own transit fleets eligible?

A: Yes, public schools can have up to 100% of the cost be covered under the EMT. Private, non-government schools can have up to 75% of the cost be covered.

Q: Is Sierra Club advocating specific uses of the EMT funds over other uses?
A: To promote diesel and natural gas, which Sierra Club recommends that these funds are used to advance low and zero emissions vehicles. Each state will implement clean transportation plans according to state. For instance, states with dirty ports may want to build ports states may want to consider installing charging stations for red bus routes to reduce range anxiety, states with dense metropolitan areas might want to consider replacing diesel transit buses with electric or fuel cell buses. However, we strongly encourage you to maximize allowable dollars to build out high speed charging networks and build charging networks and build out charging networks in areas with high demand.

Q: Will states have to access and spend allocated trust funds?
A: Submit their plans — specifically, 60 days after receiving it are approved, the beneficiaries have 10 years to spend by the charging stations.

A: By the charging stations? Owners will have the consumer pay for them. If the charging business or the business entity that hosts the space (not the building that hosts the mall), if there are charging stations on a government agency’s property, it pays for the energy used.

Q: If a major increase in EVs plugged into it?
A: Utility on the grid. A recent study shows that if as much as 60% switched to EVs, our current grid could handle that grid if properly (municipal off-peak charging, etc). We don’t have a plan out the grid.

Q: Can a state doesn’t use their funds? 25% of supplemental funding among states that have funds. Such states will be given five more years to use.

Q: And how can states utilize it?
A: State (DERAs) is an EPA program already in place that aligns with funding. If, the EPA approves funding for a state project and EMT, the EPA will add an additional 50% to the project’s fund. $100 million for a state to replace diesel school buses with.

Q: To learn more about DERAs grants, the application process can be accessed here.
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Tools for You

Electric Vehicle Infrastructure

Zero-Emission Buses

Electric Ports

Electric Trucks

Making the Most of Your Funds
VOLKSWAGEN SETTLEMENT

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Coming soon: recording of 11/4 webinar
Electric Vehicles & The Volkswagen Settlement

Presented by: Katherine Clements
Sierra Club Environmental Law Program
Washington, DC
Presentation Roadmap:

The Main Question

Background
• The Cheating Scandal
• The Importance of NOx Reductions

Overview of the VW Settlement
• Money and How It Can Be Used
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Stakeholder Engagement Opportunities
• Ways to engage
• Tools to engage

Questions welcomed at the end!
To review...
The Goal:
Use $2.7 Billion To Drive Electric
The Why:
Reduce GHG Emissions
The How: VW Settlement
Thank you!

Das All.
For more information about EVs, contact:

Mary Lunetta
Campaign Representative
Electric Vehicles Initiative | Sierra Club
email: mary.lunetta@sierraclub.org
cell: 520.252.2335
Questions?

Gina Coplon-Newfield
Campaign Director, Electric Vehicles Initiative

Mary Lunetta
Campaign Representative, Electric Vehicles Initiative

Josh Stebbins
Managing Attorney, Environmental Law Program

Steve Goldstein
Legal Fellow, Environmental Law Program

Katherine Clements
Legal Assistant, Environmental Law Program