

VW Settlement

Public Informational Session

Thursday, February 23, 2017

Presented By: DEEP Mobile Sources Group

DEEP Headquarters, Hartford



Connecticut Department of Energy and Environmental Protection

Volkswagen Violations



Connecticut Department of Energy and Environmental Protection

Timeline

2008 EPA Introduces Stronger Diesel Standards

2009 VW Begins Installing Defeat Devices on Diesel Vehicles

Recognizes federal and California test procedures and alters performance to meet standards

2014 Independent Researchers Publish Results

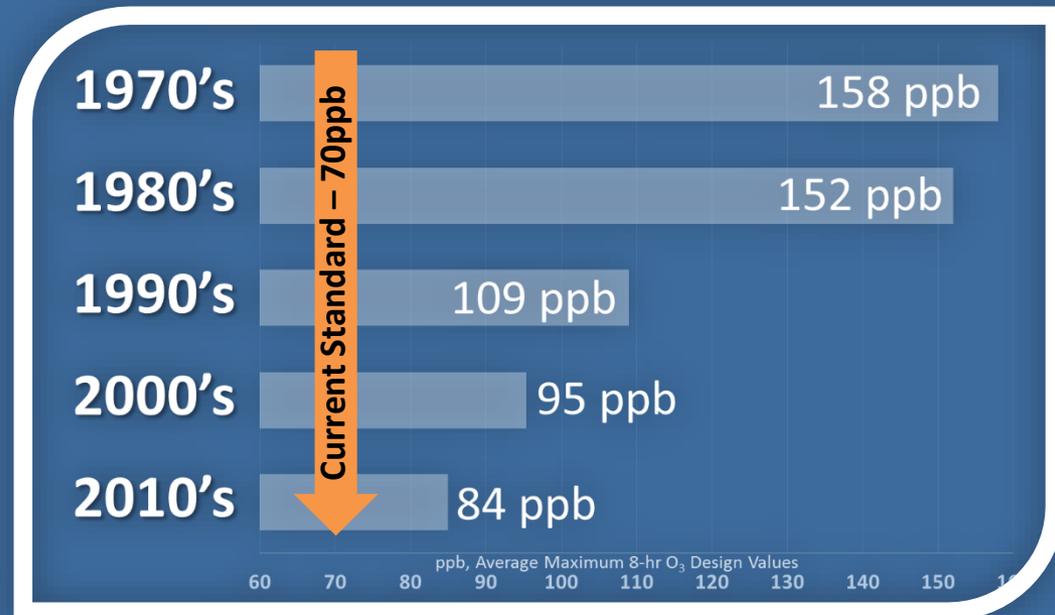
“significantly higher in-use emissions” than certified levels for 2012 Jetta TDI



Why NOx Matters in CT: Ozone

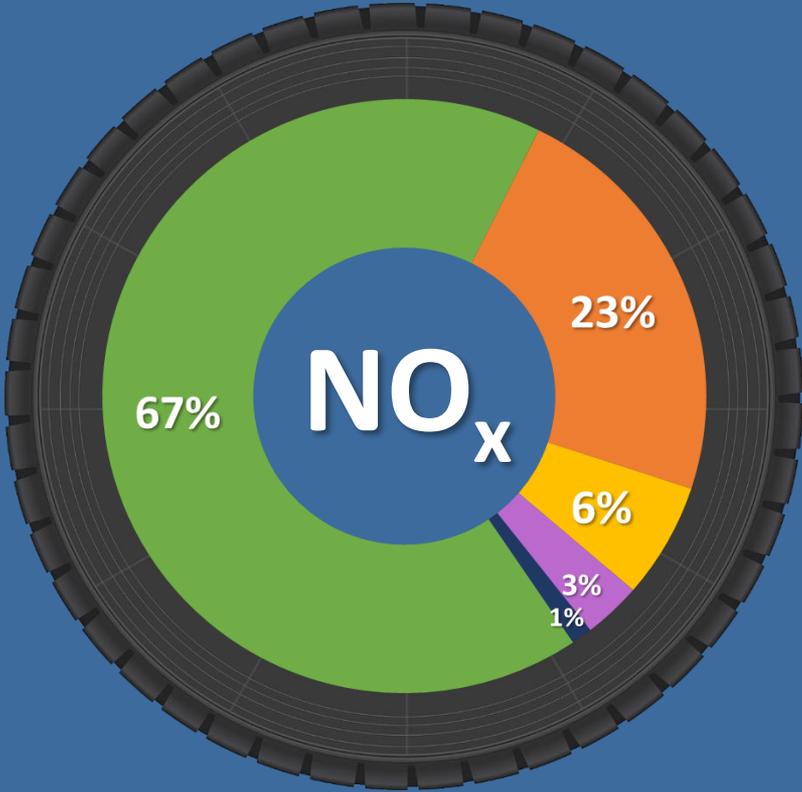
- NOx is emitted by cars, trucks, power plants, industrial sources - basically, anything that burns fuel emits NOx
- Ozone forms in air when NOx (and other pollutants) chemically react in the presence of sunlight
- Ozone is a harmful respiratory irritant, especially in children and elderly
- EPA revises ozone standards regularly to protect public health

Lower Ozone Over Time – But Still Unhealthy



NOx Emissions in CT

Mobile Sources
account for
67%
of all NOx
emissions in CT
(on-road and non-road)



- Mobile
- Other Fuels
- Waste Disp.
- EGUs
- Other

“Other Fuels” is the combination of residential, commercial and industrial fuel use.

NOx Data: 2014 National Emissions Inventory (NEI)



In the News

September 2015

- VW publically admits to altering vehicles to meet federal and California standards
- 11 million vehicles globally, 500,000 in U.S.
- 11,911 affected 2.0 liter vehicles in Connecticut
- VW begins negotiations with Federal DOJ and CARB to remedy violations



Volkswagen Settlements



Connecticut Department of Energy and Environmental Protection

Volkswagen Settlements

- First Partial consent decree approved on October 25, 2016 addresses VW's illegal use of emission control "defeat devices" on nearly **500,000** 2.0L diesel vehicles for model years 2009-2015
- Intent of funds is to achieve **NOx reductions** to offset the excess NOx created by the subject VW vehicles



2.0L Settlement Summary

\$10.033 billion for compensation to VW owners

- Direct compensation, vehicle buyback and/or repairs
-

\$2.7 billion into environmental mitigation trust

- Support environmental programs over 10 years to reduce NOx by the amount equal to or greater than caused by VWs cars
 - States must register as beneficiaries of the trust to access funds
-

\$2 billion ZEV investment commitment from VW over and above any amount VW planned to spend on such technology

- \$1.2 billion national spend; \$800 million CA spend
- Four “30 month” plans to spend down this amount



Legal Action Continued...

- Additional consent decree on December 20, 2016 addressing 3.0L diesel VW, Audi and Porsche vehicles
 - Adds funding to mitigation trust - CT to receive an additional **\$4.1 million**.
 - Buyback or recall for affected vehicles (Approved by CARB January 6)
- Criminal charges brought against former VW U.S. compliance officer for cover up of cheating. (Jan 8, 2017)
- VW agrees to pay **\$1.25** billion to U.S. Department of Justice in criminal penalties (Jan 11, 2017)



Further Legal Actions Possible

- CT's Attorney General investigating state environmental claims against VW and others in conjunction with other states
- Additional investigations into Audi vehicles that are reportedly showing higher laboratory GHG emissions than reported



VW ZEV Investment - Appendix C

- Allocations: **\$800k** for CA, **\$1.2B** for rest of US
- VW hired Brendan Jones as CEO of Electrify America
- Goal to increase usage of ZEV technology
 - Invest in EV charging infrastructure
 - Increase awareness and foster education about EVs
- VW will review project proposals and develop a plan to decide how funds will be spent
- EPA/CARB will review and approve VW plan



VW ZEV Investment - Appendix C

- 1st round of project proposals closed Jan 16, 2017, proposals for the second round are still being accepted
- VW is looking for:
 - Shovel ready opportunities/sites
 - Projects that request large banks of chargers per location
 - Projects that generate large publicity opportunities
 - Unique brand neutral educational programs that can be applied nationally and/or regionally

Submit Proposals at

www.electrifyamerica.com

electrify america



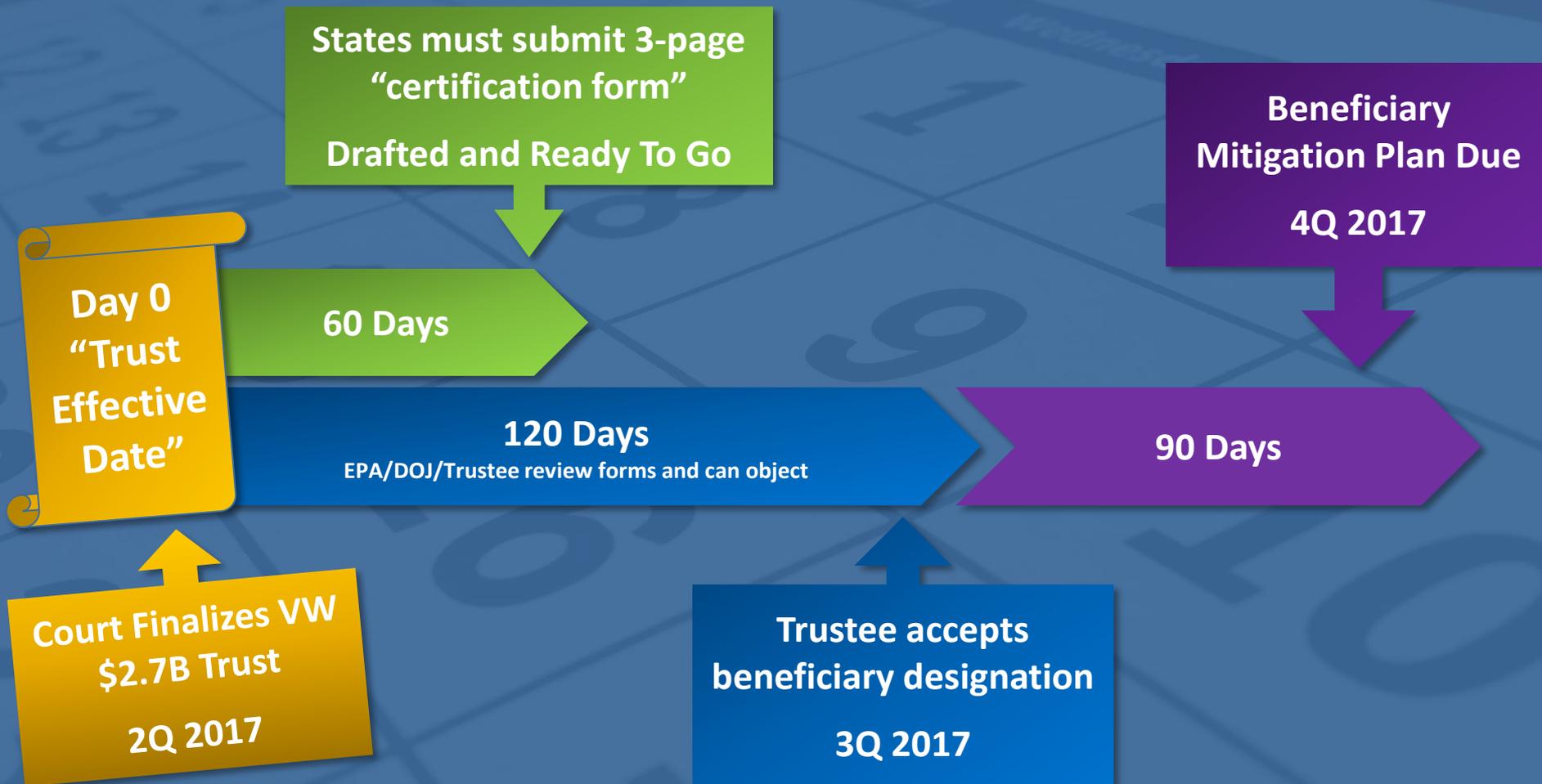
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Environmental Mitigation Trust – Appendix D

- Allocation for CT is about **\$51.6 M + \$4.1 M**
 - This allocation could increase if potential beneficiaries opt out
- Disbursement over **10 year** schedule
- Trust account will be administered by a trustee (TBD)
 - Trustee will approve project funding based on applications for eligible projects meeting specific criteria
- To access funds, CT must first become a “trust beneficiary” and:
 - Submit certification of legal authority and consent to trustee authority (and jurisdiction of federal district court for Nor’Cal)
 - Submit a “beneficiary mitigation plan” subject to review/approval



Timeframes



Connecticut's Proposed Draft Mitigation Plan



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Mitigation Trust – CT Plan

- CT must draft and submit a Beneficiary Mitigation Plan
 - Due date not yet known
 - Provide public with high level vision for how CT will use funds to reduce NOx emissions
- Informal Comment Period Now Open
 - Open & transparent plan with multiple opportunities for comment
 - Web site portal for info www.ct.gov/deep/vw
 - DEEP staff developing inventories of equipment and ideas
 - Initial focus on proven ideas & established processes, longer range focus on transformative projects
 - Analytics and the new three “E’s”:
 - emissions, economics and energy



CT Mitigation Plan – Our Initial Thoughts

- Flexible plan to cover all eligible project areas
- Immediate NOx reductions to offset illegal VW pollution
- Ability to grow with advancements of transformative mobile source technologies (i.e. electric HD trucks)
- Spread the wealth – Economically responsible projects that result in significant emissions reductions



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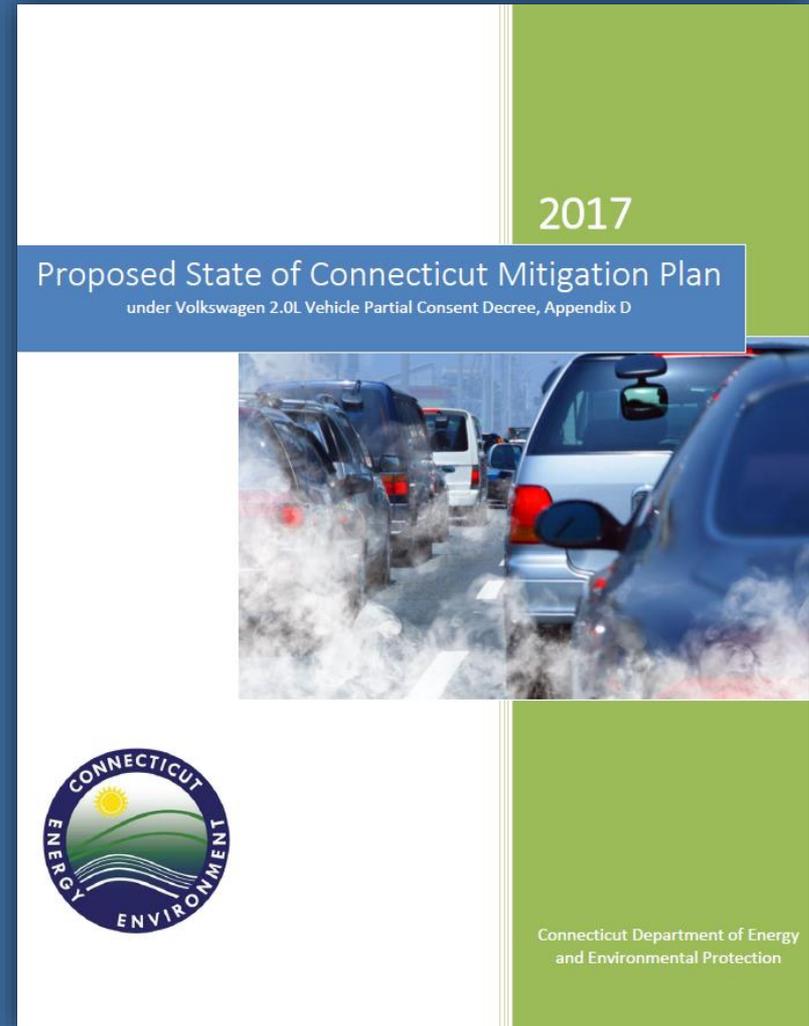
The Draft Mitigation Plan

Topics Covered:

- Funding Priorities
- Funding Allocations
- Eligible Project Types
- Anticipated Benefits

Plan Available at:

www.ct.gov/deep/vw



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Funding Priorities

- Greatest NOx emission reduction per dollar invested
- Transformative projects with statewide impact
- Applicants with demonstrated experience implementing diesel reduction projects
- Impact in environmental justice areas
- Projects with verified funding cost-share
- Projects that can be implemented within eighteen months of the award date



Proposed Funding Allocations

At least...

70%

- On-Road Heavy Duty Vehicles
- Non-Road Equipment
- Commercial Marine Vessels
 - Locomotives
 - Diesel Emission Reduction Act (DERA) Option



Up to...

15%

Zero Emission Vehicle Supply Equipment

Up to...

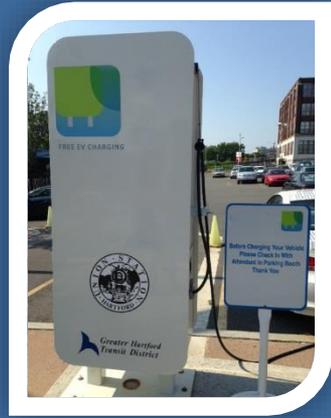
15%

Administrative Expenditures



Zero Emission Vehicle Supply Equipment

Eligible Equipment



Level 1, Level 2 or
Fast Charging
Equipment for
Electric Vehicles



Hydrogen (H₂)
Fuel Cell
Vehicle Supply
Equipment

Eligibility Criteria

EVSE: Must be located publicly, or at a workplace,
or at a multi-unit dwelling

H2 Fueling Station: Must be publicly available and
dispensing pressure of 70MPa

47%



of all Mobile
NOx in CT (2014)



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Zero Emission Vehicle Supply Equipment

EV Projects Reimbursements



Up to...

100%

Public
Government
Projects

80%

Public Non-
government
Projects

60%

Workplace or
Multi-Unit
Projects

H₂ Projects Reimbursements



Up to...

33%

dispensing capacity
of 250kg/day or
greater

25%

dispensing capacity
of 100kg/day –
250kg/day



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On-Road Heavy Duty Vehicles

Eligible Equipment

Class 4 - 8 Local Freight Trucks

Port Drayage Trucks

Class 4-8 School, Shuttle and Transit Buses



Eligibility Criteria

Trucks: Engine Model Years between 1992– 2009

Buses: Engine Model Years 2009 and older



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On Road Heavy Duty Vehicles

Government Projects (includes some privately owned school buses)

Up to... **100%**

- Repower with a new diesel or alternate fueled engine
- Replace with a new diesel or alternate fueled vehicle
- Repower with a new all-electric engine (incl. infrastructure)
- Replace with a new all-electric vehicle (incl. infrastructure)

Non-Government Projects

Up to... **40%** • Repower with a new diesel or alternate fueled engine

25% • Replace with a new diesel or alternate fueled vehicle (Drayage – 50%)

75% • Repower with a new all-electric engine (incl. infrastructure)

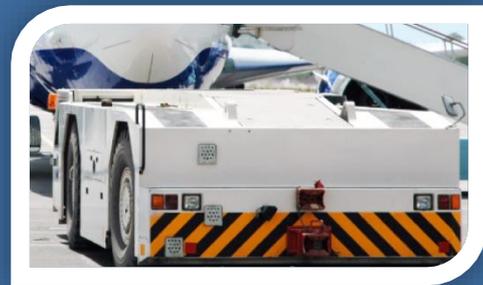
75% • Replace with a new all-electric vehicle (incl. infrastructure)



Non-Road Equipment

Eligible Equipment

Airport Ground Support Equipment (GSE)



Forklifts



Port Cargo Handling Equipment



Eligibility Criteria

GSE: Tier 0 – 2; and uncertified, or 3 gr/bhp-hr or higher certified SI-engine

Forklifts: 8,000 lbs lift capacity or greater

Port Equip: rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hostlers and yard tractors that operate within ports



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Non-Road Equipment

Government Projects

Up to...

100%

- Repower with a new all-electric engine (incl. infrastructure)
- Replace with a new all-electric vehicle (incl. infrastructure)

Non-Government Projects

Up to...

75%

- Repower with a new all-electric engine (incl. infrastructure)
- Replace with a new all-electric vehicle (incl. infrastructure)



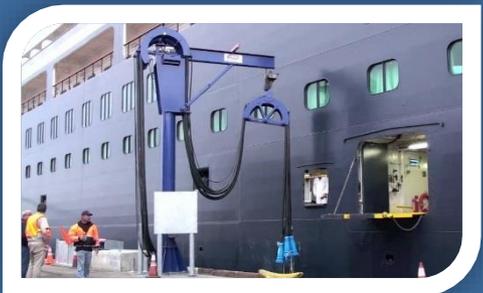
Commercial Marine Vessels

Eligible Equipment

Ferries and Tugs



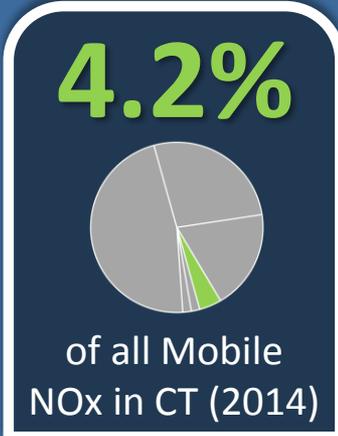
Shorepower for ocean-going vessels



Eligibility Criteria

Ferries and Tugs: Unregulated, Tier 1 or Tier 2 marine engines

Shorepower: components of a shore-side system that allows a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth



Commercial Marine Vessels

Government Projects

Up to...

100%

- Repower with a new diesel or alternate fueled engine
- Repower with a new all-electric engine (incl. infrastructure)
- Cover costs associated with a shore-side system

Non-Government Projects

Up to...

40%

- Repower with a new diesel or alternate fueled engine

75%

- Repower with a new all-electric engine (incl. infrastructure)

25%

- Cover costs associated with a shore-side system



Locomotives

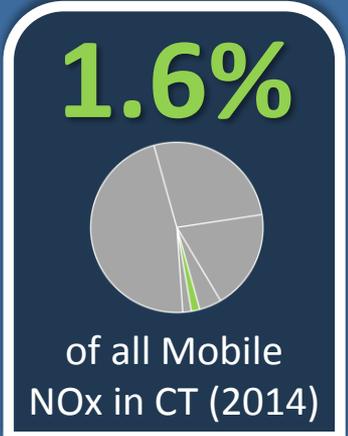
Eligible Equipment

Freight Switchers



Eligibility Criteria

Pre-Tier 4 switcher locomotives that operate 1,000 or more hours per year



Locomotives

Government Projects

Up to...

100%

- Repower with a new diesel or alternate fueled engine
- Replace with a new diesel or alternate fueled switcher
- Repower with a new all-electric engine (incl. infrastructure)
- Replace with a new all-electric switcher (incl. infrastructure)

Non-Government Projects

Up to...

40%

25%

75%

75%

- Repower with a new diesel or alternate fueled engine
- Replace with a new diesel or alternate fueled switcher
- Repower with a new all-electric engine (incl. infrastructure)
- Replace with a new all-electric switcher (incl. infrastructure)



Diesel Emission Reduction Act (DERA) Option

- Allows for a wider range of eligible projects
- Trust funds can potentially cover voluntary match for CT to qualify for additional state DERA funds (approx. \$100k-\$200k)
- Trust Funds can not be used for mandatory match for individual projects
- EPA comparison chart detailing differences between Options 1-9 and DERA Option available at www.ct.gov/deep/vw

Eligibility Criteria

Proposed projects must meet the requirements of the state DERA program



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Diesel Emission Reduction Act (DERA) Option

- Additional projects allowed through DERA option include, but are not limited to:

Long Haul Locomotives	Replacement, repower, engine upgrades
Ag or Construction Equipment	Replacement or repower
Comm. Marine Vessels (not ltd to tugboats and ferries)	Replacement, repower, engine upgrades
Diesel Vehicles and Equipment	<ul style="list-style-type: none">• Idle reduction technologies (inc. auxiliary power units and shorepower)• Retrofit technologies
Transport Refrigeration Units	Replacement or repowering



Mitigation Plan and NOx Reductions

- Previous DERA projects have shown that lifetime NOx reductions can be significant when the right projects are chosen:

	P&W Railroad APUs (idle reduction)	Cross Sound Ferry MV Susan Anne Engine Upgrade	Enfield Recycling Trucks Replacement	
				
Type	Rail	Marine	HD Trucks	
DERA Funding	\$9.6k	\$250k	\$147k	
Total Funding	\$23.9k	\$1.33M	\$588k	
NOx Reduction	(per year)	48.5 tons	48.0 tons	3.76 tons
	(lifetime)	1,309 tons	719.4 tons	85.2 tons



Anticipated Benefits

Environmental Benefits

- Potential reduction in NOx and greenhouse gas emissions

Energy and Economic Benefits

- Increased vehicle and equipment sales
- Support for local businesses
- Transportation energy diversification
- Reduction in operation, fuel, and maintenance cost for vehicle and equipment
- Increased job opportunities for mechanics, electricians, construction



Next Steps

We Need Your Input

- Go to www.ct.gov/deep/vw
- Sign up for our VW Email Distro List (online form)
- Informal comment period closes on February 28, 2017
- Look out for the *formal* public notice of the Mitigation Plan and submit additional comments
- Website will be updated when grant opportunities become available



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