Rule Making Advisory Committee

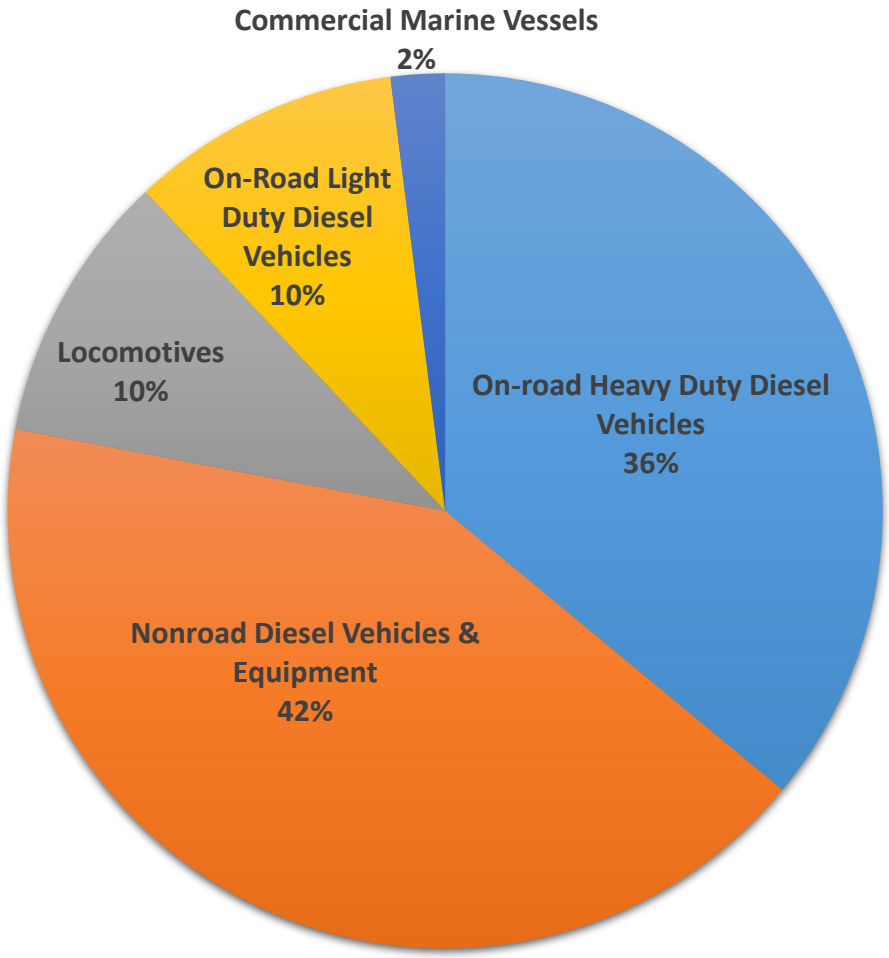
Understanding the Environmental Mitigation Trust and Diesel Emissions Reduction Act

March 9th, 2020

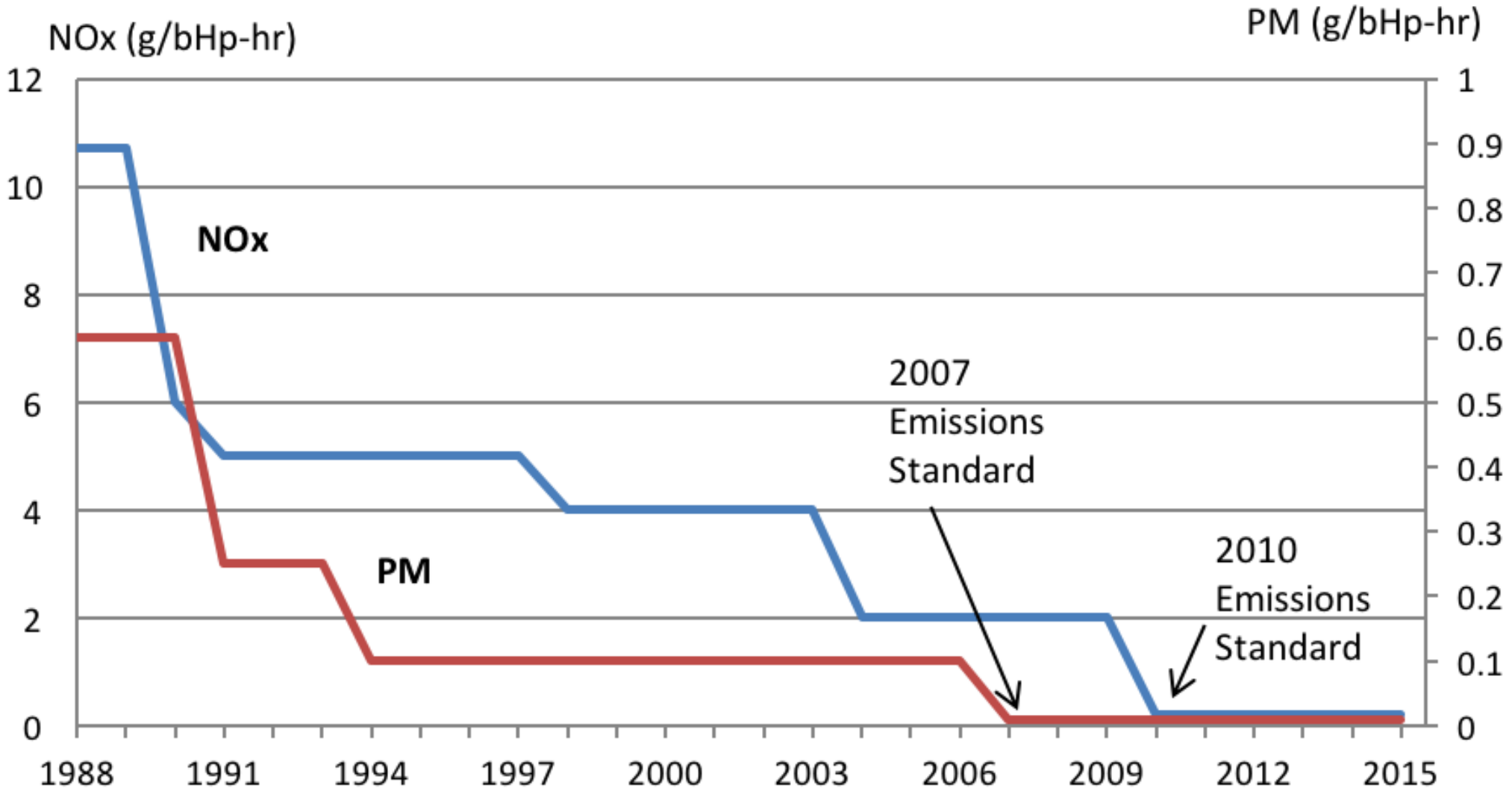
Morgan Schafer
Air Quality Analyst

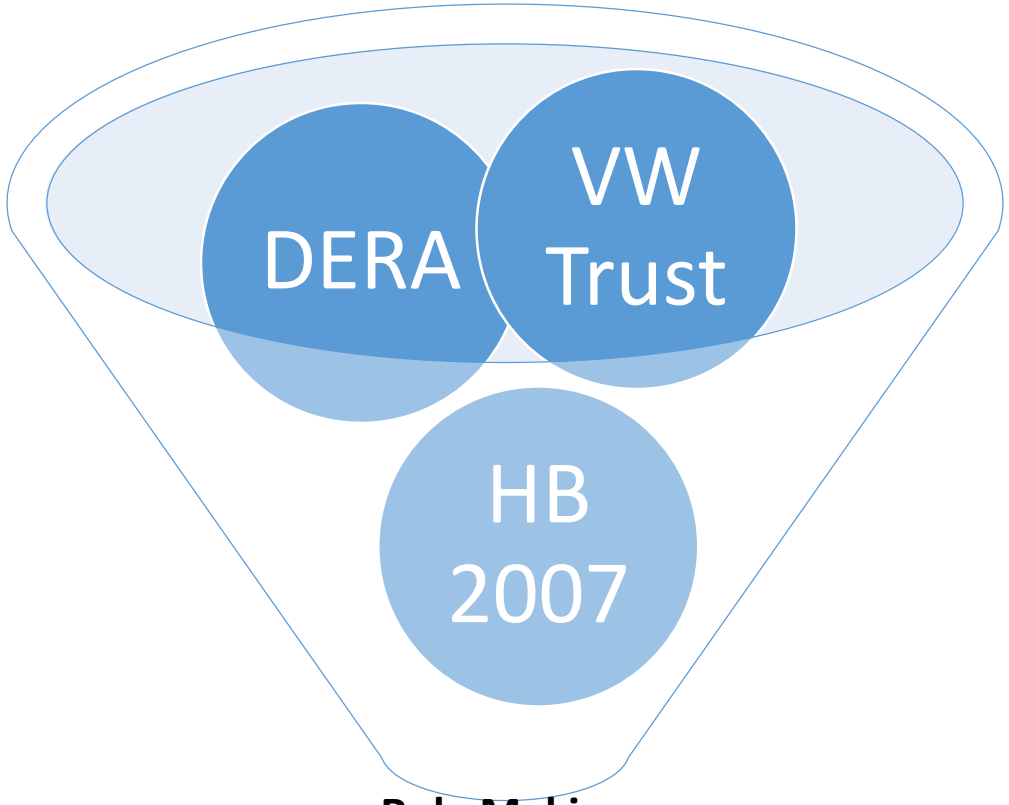
Profile of Diesel Emissions in Oregon

2014 Oregon NEI Diesel $PM_{2.5}$ Emissions (tons/yr)



On Road Diesel Engine Emission Standards





Rule Making

Diesel Reduction Grant Awards

Mitigation Trust

- Emission Control Defeat Devices
- Litigation resulted in Environmental Mitigation Trust Agreement
- Oregon’s allocation is $72.9 million
- Funding guidelines

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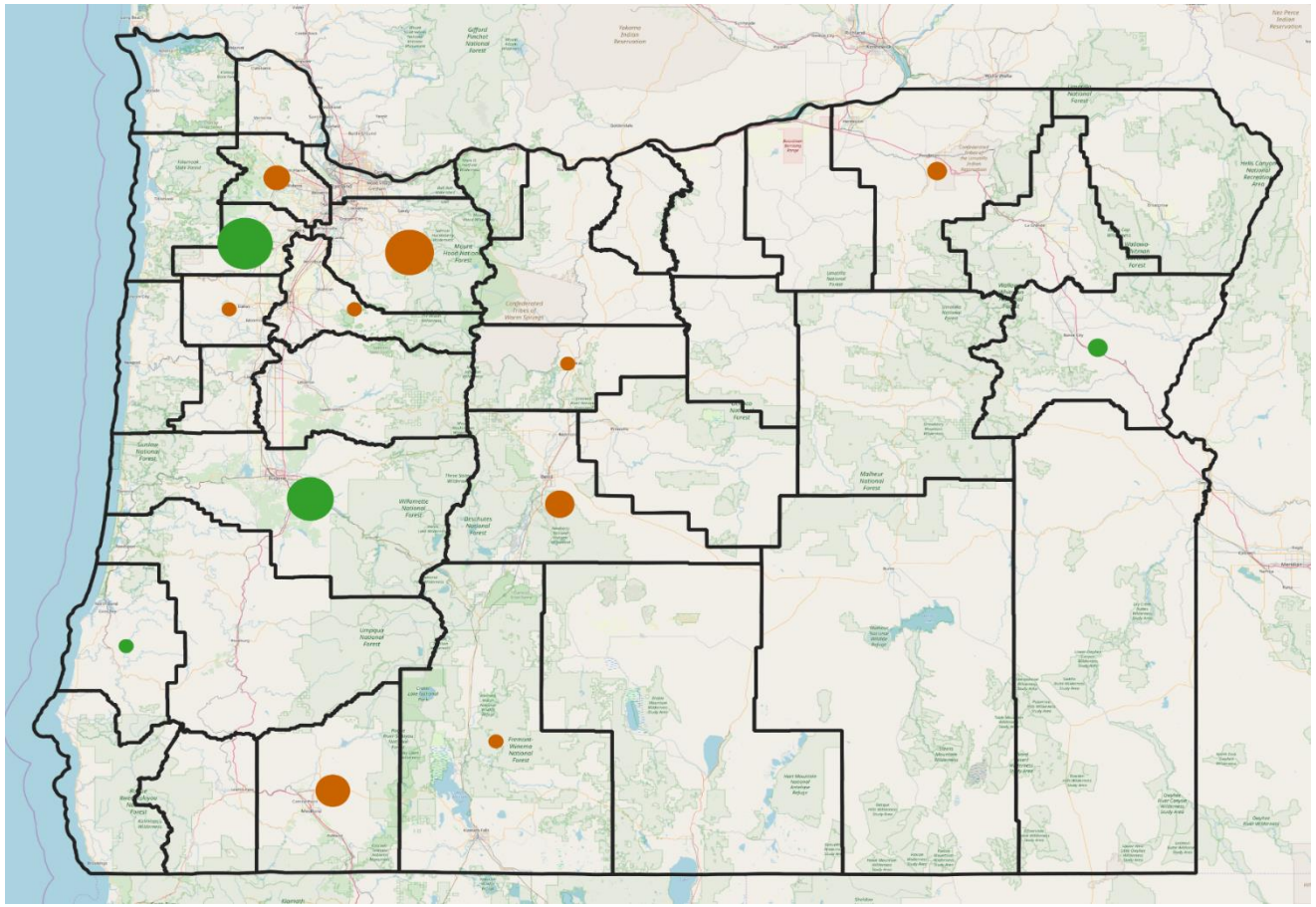
Mitigation Trust: School Bus Program



In progress

Complete

EPA: Diesel Emissions Reduction Act

DERA Funding Benefits

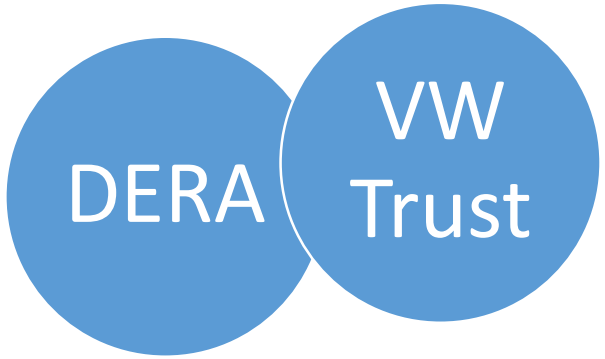
Since 2008, the DERA program has achieved impressive outcomes and a range of benefits, summarized in Exhibit 1.

Exhibit 1: DERA Program Benefits and Accomplishments (FYs 2008-2016)

Investment of DERA Program	Emission and Fuel Reductions
$629 million funds awarded	472,700 tons of NO_x
67,300 engines retrofitted or replaced	15,490 tons of PM
Up to $19 billion in monetized health benefits	17,700 tons of hydrocarbon
Up to 2,300 fewer premature deaths	61,550 tons of carbon monoxide
64% of projects targeted to areas with air quality challenges	5,089,170 tons of carbon dioxide
3:1 leveraging of funds from non-federal sources	454 million gallons of fuel saved

Trust and DERA Considerations

- Type of equipment
- Maximum Reimbursement
- Ownership and verification
- Usage
- Scrappage for replacements
- Activity



United States Environmental Protection Agency

Office of Transportation and Air Quality
EPA-420-F-19-043
April 2019

Detailed Comparison of VW Eligible Mitigation Action 1-9 and Eligible Mitigation Action #10 (DERA Option) For FY 2019 State DERA Grants

Eligible Mitigation Actions 1-9*				Eligible Mitigation Action 10: DERA Option**		
Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks) **Class 4-7 Local Freight Trucks (Eligible Medium Trucks)** For, 1) Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed EMA, and 2) Eligible Trucks shall also include 2010-2012 engine model year trucks.				**Class 5-8 Medium and Heavy Duty Highway Vehicles (including Drayage Trucks)**		
Activity	Vehicle and Equipment Eligibility (Engine Model Year)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Engine replacement with new diesel or alternate fueled engine, MY (model year) in which the EMA occurs or one engine model year prior	1992-2009	40%	100%	Engine replacement with diesel or alternate fueled engine, 2016 MY or newer (2013 MY or newer engine for Drayage)	1996-2009	40%
				Engine replacement with engine certified to CARB's Optional Low-NOx standards, 2016 MY or newer	1996 or newer	50%
Engine replacement with new all-electric engine, engine MY in which the EMA occurs or one engine MY prior	1992-2009	75%	100%	Engine replacement with an electric motor or an electric power source, 2016 MY or newer	1996 or newer	60%
Vehicle replacement with new diesel or alternate fueled vehicle, engine MY in which the EMA occurs or one engine MY prior	1992-2009	25% (50% for Drayage)	100%	Vehicle replacement with diesel or alternate fueled vehicle, 2016 MY or newer engine (2013 MY or newer engine for Drayage)	1996-2009	25% (50% for Drayage)
				Vehicle replacement with vehicle powered by engine certified to CARB's Optional Low-NOx standards, 2016 MY or newer engine	1996 or newer	35% (50% for Drayage)
Vehicle Replacement with all-electric vehicle, engine MY in which the EMA occurs or one engine MY prior	1992-2009	75%	100%	Vehicle replacement with all-electric vehicle, 2016 MY or newer engine	1996 or newer	45% (50% for Drayage)
				Retrofits with verified exhaust control technologies (SCR is the only eligible retrofit technology for vehicles with 2007-2009 MY engines)	1996-2009	100%
				Verified Aerodynamic Technologies and Low Rolling Resistance Tires (with one of above activities)	1996 or newer	100%
				Verified Idle Reduction Technologies (APUs and generators are not eligible on vehicles with MY 2007 or newer engines)	1996-2009	25% (100% when bundled with retrofit)
				Clean Alternative Fuel Conversion	1996 or newer	40%

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Detailed Comparison of VW Eligible Mitigation Action 1-9 and Eligible Mitigation Action #10 (DERA Option) For FY 2019 State DERA Grants

Eligible Mitigation Actions 1-9[1]				Eligible Mitigation Action 10: DERA Option[2,3]		
Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks) Class 4-7 Local Freight Trucks (Eligible Medium Trucks) For: 1) Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed EMA, and 2) Eligible Trucks shall also include 2010-2012 engine model year trucks.				Class 5-8 Medium and Heavy Duty Highway Vehicles (Including Drayage Trucks)		
Activity	Vehicle and Equipment Eligibility (Engine Model Year)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Engine replacement with new diesel or alternate fueled engine, MY (model year) in which the EMA occurs or one engine model year prior	1992-2009	40%	100%	Engine replacement with diesel or alternate fueled engine, 2010 MY or newer (2013 MY or newer engine for Drayage)	1996-2009	40%
				Engine replacement with engine certified to CARB's Optional Low NOx standards, 2010 MY or newer	1996 or newer	50%
Engine replacement with new all electric engine, engine MY in which the EMA occurs or	1992-2009	75%	100%	Engine replacement with all electric motor or all electric power source, 2010 MY or newer	1996 or newer	60%
Vehicle replacement with new diesel or alternate fueled vehicle, engine MY in which the EMA occurs or one engine MY prior	1992-2009	25% (50% for Drayage)	100%	Vehicle replacement with diesel or alternate fueled vehicle, 2010 MY or newer engine (2013 MY or newer engine for Drayage)	1996-2009	25% (50% for Drayage)
				Vehicle replacement with vehicle powered by engine certified to CARB's Optional Low NOx standards, 2010 MY or newer engine	1996 or newer	25% (50% for Drayage)
Vehicle Replacement with all-electric vehicle, engine MY in which the EMA occurs or one engine MY prior	1992-2009	75%	100%	Vehicle replacement with all-electric vehicle, 2010 MY or newer engine	1996 or newer	40% (50% for Drayage)
				Retrofits with verified exhaust control technologies (DPF is the only eligible retrofit technology for vehicles with 2007-2009 MY engines)	1996-2009	100%
				Verified Aerodynamic Technologies and Low Rolling Resistance Tires (with one of above activities)	1996 or newer	100%
				Verified Idle Reduction Technologies (APUs and generators are not eligible on vehicles with MY 2007 or newer engines)	1996-2009	25% (100% when bundled with retrofit)
				Class Alternative Fuel Conversion	2010 or newer	40%

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Activity	Vehicle and Equipment Eligibility (Engine Model Year)	Trust Funding Limits	
		Non-Gov. Owned	Gov. Owned
Engine replacement with new diesel or alternate fuelled engine, MY (model year) in which the DMA occurs or one engine model year prior	1992-2009	40%	100%
Engine replacement with new all electric engine, engine MY in which the DMA occurs or one engine MY prior	1992-2009	75%	100%
Vehicle replacement with new diesel or alternate fuelled vehicle, engine MY in which the DMA occurs or one engine MY prior	1992-2009	25% (50% for Drayage)	100%
Vehicle Replacement with all-electric vehicle, engine MY in which the DMA occurs or one engine MY prior	1992-2009	75%	100%

Eligible Mitigation Action 10 (DERA Option)[2]		
Class 5-8 Medium and Heavy Duty Highway Vehicles (Including Drayage Trucks)		
Activity	Vehicle and Equipment Eligibility (Engine Model Year)	DERA Funding Limits
Engine replacement with diesel or alternate fuelled engine, 2010 MY or newer (2013 MY or newer engine for Drayage)	1996-2009	40%
Engine replacement with engine certified to CARB's Optional Low-NOx standards, 2010 MY or newer	1996 or newer	50%
Engine replacement with an electric motor or an electric power source, 2010 MY or newer	1996 or newer	60%
Vehicle replacement with diesel or alternate fuelled vehicle, 2010 MY or newer engine (2013 MY or newer engine for Drayage)	1996-2009	25% (50% for Drayage)
Vehicle replacement with vehicle powered by engine certified to CARB's Optional Low-NOx standards, 2010 MY or newer engine	1996 or newer	25% (50% for Drayage)
Vehicle replacement with all-electric vehicle, 2010 MY or newer engine	1996 or newer	40%
Retrofits with verified exhaust control technologies (SCR is the only eligible retrofit technology for vehicles with 2007-2009 MY engines)	1996-2009	100%
Replacement Tires (with one of above activities)	1996 or newer	100%
Verified Idle Reduction Technologies (APUs and generators are not eligible on vehicles with MY 2007 or newer engines)	1996-2009	25% (100% when bundled with retrofit)
Clean Alternative Fuel Conversion	1996 or newer	40%

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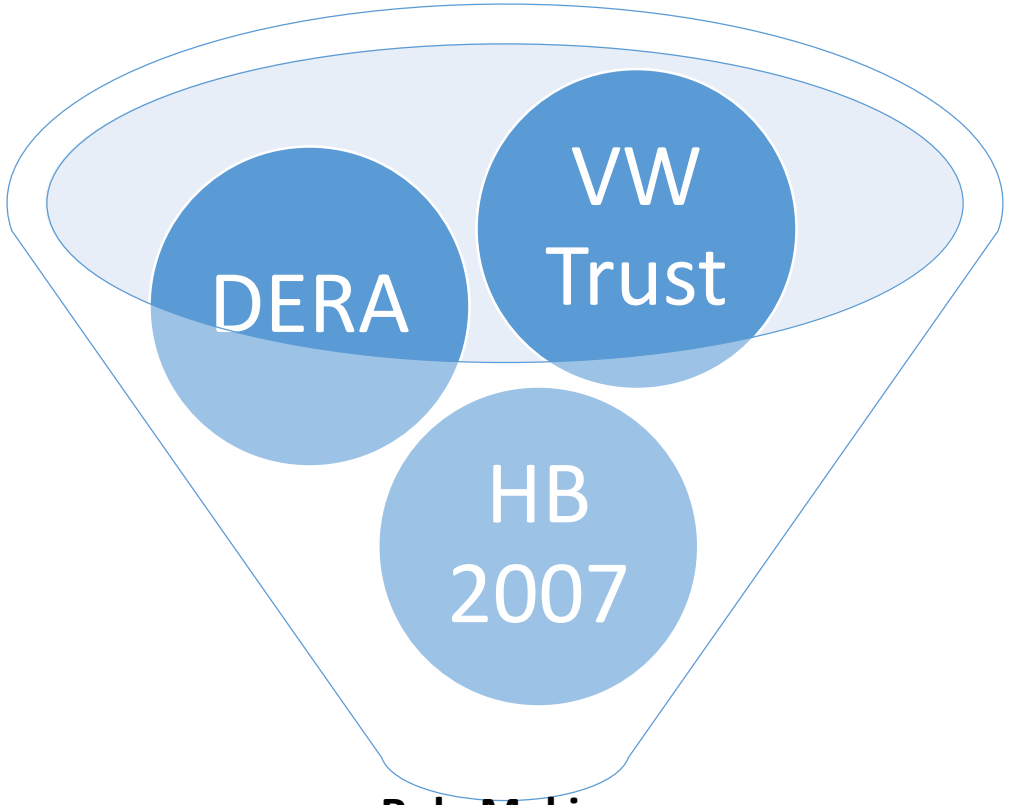
Using the tables

https://bit.ly/32Ow7Zx

- Replacement of a 1998 with a 2020 vehicle, privately owned
- Replacement of a 1992 with a 2016 vehicle, privately owned
- Adding retrofit and anti-idling technology to two 2001 vehicles
- Repower of a 2003 with a 2020 natural gas engine, government owned



Rule Making

Diesel Reduction Grant Awards

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