

### Detailed Comparison of VW Eligible Mitigation Action 1-9 and Eligible Mitigation Action #10 (DERA Option)

<u>Eligible Mitigation Actions 1-9</u>				<u>*Eligible Mitigation Action 10: DERA Option</u>		
<b>Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)</b> <b>Class 4-7 Local Freight Trucks (Eligible Medium Trucks)</b> 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.				<b>Class 5-8 Medium and Heavy Duty Highway Vehicles (including Drayage Trucks)</b>		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Repower with new diesel or alternate fueled engine with the engine MY (model year) in which the EMA occurs or one engine model year prior	1992-2009	40%	100%	Repower with 2015 MY or newer engine (diesel or alternative fuel)	1994-2006	40%
				Repower with 2015 MY or newer engine certified to CARB's Optional Low-NOx standards	1994-2006	50%
Repower with all-electric engine with the engine MY in which the EMA occurs or one engine model year prior	1992-2009	75%	100%	Repower with 2015 MY or newer all-electric engine	1994-2010	60%
Replacement with new diesel or alternate fueled vehicle with the engine MY in which the EMA occurs or one engine MY prior	1992-2009	25% (50% for Drayage)	100%	Replacement with vehicle powered by 2015 MY or newer engine (diesel or alternative fuel) (2011 or newer for Drayage)	1994-2006	25% (50% for Drayage)
				Replacement with 2015 MY or newer engine certified to CARB's Optional Low-NOx standards	1994-2006	35%
Replacement with all-electric vehicle with the engine MY in which the EMA occurs or one engine model year prior	1992-2009	75%	100%	Replacement with 2015 MY or newer all-electric vehicle	1994-2010	45%
				Retrofits of verified exhaust control technologies	1994-2006	100%
				Verified Aerodynamic Technologies Low Rolling Resistance Tires (in conjunction with above activities)	1994-2006	100%
				Verified Idle Reduction Technologies (in conjunction with above activities)	1994-2006	100%

<u>Eligible Mitigation Actions 1-9</u>				<u>*Eligible Mitigation Action 10: DERA Option</u>		
<b>Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)</b> For, 1) Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year buses at the time of the proposed EMA, and 2) Eligible Buses shall also include 2010-2012 engine model year class 4-8 school buses, shuttle buses, or transit buses.				<b>Type A, B, C, D Buses</b> <b>Class 5-8 Transit, Shuttle, or other buses</b>		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Repower with new diesel or alternate fueled engine with the engine MY in which the EMA occurs or one engine model year prior	2009 and older	40%	100%	Repower with 2015 MY or newer engine (diesel or alternative fuel)	1994-2006	40%
				Repower with 2015 MY or newer engine certified to CARB's Optional Low-NOx standards	1994-2006	50%
Repower with all-electric engine with the engine MY in which the EMA occurs or one engine MY prior	2009 and older	75%	100%	Repower with 2015 MY or newer all-electric engine	1994-2010	60%
Replacement with new diesel or alternate fueled vehicle with the engine MY in which the EMA occurs or one engine MY prior	2009 and older	25%	100%	Replacement with vehicle powered by 2015 MY or newer engine (diesel or alternative fuel)	1994-2006	25%
				Replacement with vehicle powered by a 2015 MY or newer engine certified to CARB's Optional Low-NOx standards	1994-2006	35%
Replacement with all-electric vehicle with the engine MY in which the EMA occurs or one engine MY prior	2009 and older	75%	100%	Replacement with 2015 MY or newer all-electric vehicle	1994-2010	45%
				Idle Reduction Technology (in conjunction with above activities, or on school buses previously retrofitted with verified emission control device)	1994-2006	100%

<b><u>Eligible Mitigation Actions 1-9</u></b>				<b><u>*Eligible Mitigation Action 10: DERA Option</u></b>		
<b>Freight Switchers</b> Must currently operate 1000+ hours per year.				<b>Line Haul (freight and passenger) and Switcher Locomotives</b> Must currently operate 1000+ hours per year		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Repower with new diesel or alternate fueled engine or generator sets that are EPA certified for the engine MY in which the EMA occurs	Pre-Tier 4	40%	100%	Repower with 2015 MY or newer Tier 4 engine	Unregulated – Tier 2; Tier 2+ switcher	40%
Repower with all-electric engine that is engine MY in which the EMA occurs	Pre-Tier 4	75%	100%	Repower with 2015 MY or newer all-electric engine	Unregulated – Tier 2; Tier 2+ switcher	60%
Replacement with new diesel or alternate fueled freight switcher that is EPA certified for the engine MY in which the EMA occurs	Pre-Tier 4	25%	100%	Replacement with vehicle/equipment powered by a 2015 MY or newer engine (diesel or alternate fuel)	Unregulated – Tier 2; Tier 2+ switcher	25%
Replacement with all-electric freight switcher that is engine MY in which the EMA occurs	Pre-Tier 4	75%	100%	Replacement with 2015 MY or newer all-electric vehicle/equipment	Unregulated – Tier 2; Tier 2+ switcher	45%
				Certified Remanufacture System or Verified Engine Upgrade	Unregulated - Tier 2+	40%
				Retrofit with verified exhaust control technology	Unregulated - Tier 2+	100%
				Idle reduction technology, including shore power	Unregulated – Tier 2+	40%
<b>Ferries/Tugs</b>				<b>Marine Engines</b> Must currently operate 1000+ hours per year.		
Repower with new Tier 3 or 4 diesel or alternate fueled engine	Pre-Tier 3	40%	100%	Repower with a 2015 MY or newer Tier 3 or Tier 4 engine (diesel or alternative fuel)	Pre-Tier 3	40%
Repower with new all-electric engine	Pre-Tier 3	75%	100%	Repower with 2015 MY or newer all-electric engine	Pre-Tier 3	60%
Certified Remanufacture System or Verified Engine Upgrade	Pre-Tier 3	40%	100%	Certified Remanufacture System or Verified Engine Upgrade	Pre-Tier 3	40%

<u>Eligible Mitigation Actions 1-9</u>				<u>*Eligible Mitigation Action 10: DERA Option</u>		
Ocean Going Vessels (OGV) Shore Power				Marine Shore Power Connection System		
Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	Trust Funding Limits		Activity	Vehicle and Equipment Eligibility (Engine Model Year or Tier)	DERA Funding Limits
		Non-Gov. Owned	Gov. Owned			
Costs associated with shore-side system	n/a	25%	100%	Costs associated with shore-side system	n/a	25%
Airport Ground Support Equipment Forklifts and Port Cargo Handling Equipment				Nonroad Diesel Engines		
Repower with new all-electric engine	GSE: Pre-Tier 3 diesel; 3 g/bhp-hr and higher spark ignition	75%	100%	Repower with all-electric engine	0-50 HP = 2004 and newer;  51-300 HP = 1994 and newer;  301+HP = 1984 and newer	60%
Replacement with new all-electric airport ground support equipment	Forklifts and Port CHE: Greater than 8000 lbs lift capacity	75%	100%	Replacement with 2015 MY or newer all-electric vehicle/equipment		45%
				Repower with a 2015 MY or newer engine (diesel or alternative fuel)		40%
				Replacement with vehicle/equipment powered by 2015 MY or newer engine (diesel or alternative fuel)		25%
				Retrofit with verified exhaust control technologies		100%
				Verified Engine Upgrade	40%	
				Electrified Parking Spaces (Truck Stop Electrification)		
				Labor and equipment of eligible EPA SmartWay verified electrified parking space technologies	n/a	25%
Light Duty Zero Emission Vehicle Supply Equipment						
Level 1, level 2, or fast charging equipment that is not consumer light duty electric vehicle supply equipment						
See Appendix D-2 for details						

\* DERA Option eligibility and cost-shares are subject to change pending final FY2017 State Clean Diesel Grant Program guidance.

## **Definitions/Glossary of Terms from Appendix D-2 to Partial Consent Decree MDL No. 2672 CRB (JSC)**

**“Airport Ground Support Equipment”** shall mean vehicles and equipment used at an airport to service aircraft between flights.

**“All-Electric”** shall mean powered exclusively by electricity provided by a battery, fuel cell, or the grid.

**“Alternate Fueled”** shall mean an engine, or a vehicle or piece of equipment which is powered by an engine, which uses a fuel different from or in addition to gasoline fuel or diesel fuel (e.g., CNG, propane, diesel-electric Hybrid).

**“Certified Remanufacture System or Verified Engine Upgrade”** shall mean engine upgrades certified or verified by EPA or CARB to achieve a reduction in emissions.

**“Class 4-7 Local Freight Trucks (Medium Trucks)”** shall mean trucks, including commercial trucks, used to deliver cargo and freight (e.g., courier services, delivery trucks, box trucks moving freight, waste haulers, dump trucks, concrete mixers) with a Gross Vehicle Weight Rating (GVWR) between 14,001 and 33,000 lbs.

**“Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Buses)”** shall mean vehicles with a Gross Vehicle Weight Rating (GVWR) greater than 14,001 lbs used for transporting people. See definition for School Bus below.

**“Class 8 Local Freight, and Port Drayage Trucks (Eligible Large Trucks)”** shall mean trucks with a Gross Vehicle Weight Rating (GVWR) greater than 33,000 lbs used for port drayage and/or freight/cargo delivery (including waste haulers, dump trucks, concrete mixers).

**“Drayage Trucks”** shall mean trucks hauling cargo to and from ports and intermodal rail yards.

**“Forklift”** shall mean nonroad equipment used to lift and move materials short distances; generally includes tines to lift objects. Eligible types of forklifts include reach stackers, side loaders, and top loaders.

**“Freight Switcher”** shall mean a locomotive that moves rail cars around a rail yard as compared to a line-haul engine that move freight long distances.

**“Generator Set”** shall mean a switcher locomotive equipped with multiple engines that can turn off one or more engines to reduce emissions and save fuel depending on the load it is moving.

**“Government”** shall mean a State or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority, owning fleets purchased with government funds), and a tribal government or native village. The term ‘State’ means the several States, the District of Columbia, and the Commonwealth of Puerto Rico.

**“Gross Vehicle Weight Rating (GVWR)”** shall mean the maximum weight of the vehicle, as specified by the manufacturer. GVWR includes total vehicle weight plus fluids, passengers, and cargo.

Class 1: < 6000 lb; Class 2: 6001-10,000 lb; Class 3: 10,001-14,000 lb; Class 4: 14,001-16,000 lb; Class 5: 16,001-19,500 lb; Class 6: 19,501-26,000 lb; Class 7: 26,001-33,000 lb; Class 8: > 33,001 lb

**“Hybrid”** shall mean a vehicle that combines an internal combustion engine with a battery and electric motor.

**“Intermodal Rail Yard”** shall mean a rail facility in which cargo is transferred from drayage truck to train or vice-versa.

**“Port Cargo Handling Equipment”** shall mean rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hostlers and yard tractors that operate within ports.

**“Repower”** shall mean to replace an existing engine with a newer, cleaner engine or power source that is certified by EPA and, if applicable, CARB, to meet a more stringent set of engine emission standards. Repower includes, but is not limited to, diesel engine replacement with an engine certified for use with diesel or a clean alternate fuel, diesel engine replacement with an electric power source (grid, battery), diesel engine replacement with a fuel cell, diesel engine replacement with an electric generator(s) (genset), diesel engine upgrades in Ferries/Tugs with an EPA Certified Remanufacture System, and/or diesel engine upgrades in Ferries/Tugs with an EPA Verified Engine Upgrade. All-Electric and fuel cell Repowers do not require EPA or CARB certification.

**“School Bus”** shall mean a Class 4-8 bus sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events. May be Type A-D.

**“Tier 0, 1, 2, 3, 4”** shall refer to corresponding EPA engine emission classifications for nonroad, locomotive and marine engines.

**“Tugs”** shall mean dedicated vessels that push or pull other vessels in ports, harbors, and inland waterways (e.g., tugboats and towboats).

**“Zero Emission Vehicle (ZEV)”** shall mean a vehicle that produces no emissions from the on-board source of power (e.g., All-Electric or hydrogen fuel cell vehicles).