Grant Eligibility Criteria, Solutions, and Mandatory Cost-Share:

This document will provide a summary of eligibility criteria, diesel emission reduction methods, and maximum DERA funding permissible for each method. Please review each section carefully. For more information on DERA eligibility, click on the hyperlink to see the full 2023-2024 DERA State Guide.

Eligible Diesel Emission Reduction Projects:

The following table provides a list of DERA-eligible diesel-powered vehicles, engines, and equipment (Section VIII, Table 2 of 2023-2024 DERA State Guide).

School Buses	Includes diesel powered school buses of Type A, B, C and D. A "school bus" is defined as a passenger motor vehicle designed to carry a driver and more than 10 passengers, that the Secretary of Transportation decides is likely to be used significantly to transport preprimary, primary, and secondary school students to or from school or an event related to school.
Transit Buses	Includes diesel powered medium-duty and heavy-duty transit buses (see definition of eligible Class 5-8 vehicles below).
Medium-duty & heavy-duty Trucks	Includes diesel powered medium-duty and heavy-duty highway vehicles with gross vehicle weight rating (GVWR) as defined below: Class 5 (16,001 -19,500 lbs GVWR); Class 6 (19,501 – 26,000 lbs GVWR); Class 7 (26,001 – 33,000 lbs GVWR); Class 8 (33,001 lbs GVWR and over)
Marine Engines	Includes diesel powered Category 1, 2, and 3 marine engines and vessels.
Locomotives	Includes diesel powered line-haul, passenger, and switch engines and locomotives.
Nonroad engines, equipment, or vehicles	Diesel powered nonroad engines, equipment and vehicles including, but not limited to, those used in construction, handling of cargo (including at ports and airports), agriculture, mining, or energy production (including stationary generators and pumps).

If your vehicle/engine/equipment fits the description of an eligible project, then the following operational, ownership, usage, and remaining life requirements MUST be met (Section X, Subsection C of 2023-2024 DERA State Guide).

Operational: The existing vehicle, engine, or equipment must be fully operational. Operational equipment must be able to start, move, and have all necessary parts to be operational.

Ownership: The participating fleet owner must currently own and operate the existing vehicle or equipment and have owned and operated the vehicle during the two years prior to upgrade.

Remaining Life: The existing vehicle, engine, or equipment must have at least three years of remaining life at the time of upgrade. Remaining life is the fleet owner's estimate of the number of years until the unit would have been retired from service if the unit were not being upgraded or scrapped because of the grant funding. The remaining life estimate is the number of years of operation remaining even if the unit were to be rebuilt or sold to another fleet. The remaining life estimate depends on the current age and condition of the vehicle at the time of upgrade, as well as things like usage, maintenance, and climate.

Usage:

- For **On-highway** Vehicles: The mileage of two or more units may be combined to reach the thresholds below where two or more units will be scrapped and replaced with a single unit.
    - To be eligible for funding, the existing certified highway engine/vehicle must have accumulated at least 7,000 miles/year during the two years prior to upgrade.
    - Exception: If a recipient can demonstrate that a certified highway engine/vehicle is being used in a predominately nonroad application (e.g. firetrucks or utility trucks that idle for long periods to power auxiliary apparatus), engine operating hours as defined below in "nonroad usage" may be used for application eligibility purposes. If selected for award, EPA will review and approve eligibility on a case-by-case basis.
- For **Non-road** Vehicles, Engines, and Equipment: The engine operating hours of two or more units may be combined to reach the thresholds below where two or more units will be scrapped and replaced with a single unit.
    - Agricultural Pumps: To be eligible for funding, certified nonroad agricultural pumps must operate at least 250 hours/year during the two years prior to upgrade.
    - All Other Nonroad Engines: To be eligible for funding, certified nonroad engines should operate at least 500 hours/year during the two years prior to upgrade.

- Exception: If a recipient can demonstrate that a certified nonroad engine/vehicle is being used in a predominately highway application, vehicle mileage as defined above in "highway usage" may be used for application eligibility purposes. If selected for award, EPA will review and approve eligibility on a case-by-case basis.

- For **Locomotive & Marine** Engines: The engine operating hours of two or more units may be combined to reach the thresholds below where two or more units will be scrapped and replaced with a single unit.

    - The existing certified locomotive and marine engines must operate at least 1,000 hours/year during the two years prior to upgrade.

Eligible Diesel Emission Reduction Solutions:

The following table provides a list of DERA-eligible emission reduction solutions (Section VIII, Table 3 of 2023-2024 DERA State Guide).

Certified Vehicle and Equipment Replacements	Nonroad and highway diesel vehicles and equipment, locomotives, and marine vessels can be replaced with newer, cleaner vehicles and equipment. Eligible replacement highway vehicles include those certified by EPA and/or CARB to run on diesel or clean alternative fuel engines (including gasoline), electric generators (gensets), hybrid engines, and zero tailpipe emissions power sources (grid, battery, or fuel cell). Eligible replacement nonroad equipment, locomotives, and marine vessels include those powered by EPA and/or CARB certified diesel or clean alternative fuel engines (including gasoline), electric generators (gensets), hybrid engines; nonroad equipment, locomotives, and marine vessels powered by zero tailpipe emissions power sources (grid, battery, or fuel cell) do not require EPA or CARB certification.
Certified Engine Replacement	Nonroad and highway diesel vehicles and equipment, locomotives, and marine vessels can have their engines replaced with newer, cleaner engines. Eligible replacement highway engines include those certified by EPA and/or CARB for use with diesel or clean alternative fuel (including gasoline), electric generators (gensets), and hybrid engines, and zero tailpipe emissions power sources (grid, battery, or fuel cell). Eligible replacement nonroad, locomotive, and marine engines include those powered by EPA and/or CARB certified diesel or clean alternative fuel engines (including gasoline), electric generators (gensets), and hybrid engines; Nonroad equipment, locomotives, and marine vessel engine replacement with zero tailpipe emissions power sources (grid, battery, or fuel cell) do not require EPA or CARB certification.

Certified Remanufacture Systems	Generally, a certified remanufacture system is applied during an engine rebuild and involves the removal of parts on an engine and replacement with parts that cause the engine to represent an engine configuration which is cleaner than the original engine. Some locomotives and marine engines can be upgraded through the application of a certified remanufacture system (i.e., kit). Engine remanufacture systems may not be available for all engines, and not all remanufacture systems may achieve an emissions benefit. Applications for EPA certified remanufacture systems should include a discussion of the availability of engine remanufacture systems and indicate the pre- and post-project emission standard levels of the engines to demonstrate that the upgrade will result in a PM and/or NOx emissions benefit.
Verified Idle Reduction Technologies	An idle reduction project is generally defined as the installation of a technology or device that reduces unnecessary idling of diesel engines and/or is designed to provide services (such as heat, air conditioning, and/or electricity) to vehicles and equipment that would otherwise require the operation of the main drive or auxiliary engine(s) while the vehicle is temporarily parked or remains stationary. EPA SmartWay verified technologies currently include options to reduce idling for long haul Class 8 trucks equipped with sleeper cabs, school buses, transport refrigeration units, locomotives, and marine vessels.
Verified Retrofit Technologies	Diesel engine retrofits are one of the most cost-effective solutions for reducing diesel engine emissions. Retrofits include engine exhaust aftertreatment technologies, such as diesel oxidation catalysts (DOCs), diesel particulate filters (DPFs), closed crankcase ventilation (CCV) filtration systems, and selective catalytic reduction systems (SCRs). Manufacturer engine upgrades which achieve specific levels of emissions reductions by applying a package of components have been verified as retrofits for some nonroad and marine engines. Several systems which convert a conventional diesel engine configuration to a hybrid-electric system have been verified as retrofits for some nonroad and marine engines. Some cleaner fuels and additives have been verified as retrofits by EPA and/or CARB to achieve emissions reductions when applied to an existing diesel engine. Older, heavy-duty diesel vehicles that will not be retired for several years are good candidates for verified retrofit technologies. EPA suggests that applicants proposing to install verified retrofit technologies consult with suppliers to confirm that the proposed vehicles/engines and their duty-cycles are good candidates for the technology.
Clean Alternative Fuel Conversions	Existing highway diesel engines can be altered to operate on alternative fuels such as propane and natural gas by applying a certified alternative fuel conversion kit.

Verified Aerodynamic Technologies and Low Rolling Resistance Tires	To improve fuel efficiency, long haul Class 8 trucks can be equipped with EPA verified aerodynamic devices and/or low rolling resistance tires.

Note: For Vehicle and Equipment Replacement Projects

1) Replacement highway vehicles must be certified by EPA and/or CARB to meet applicable emission standards. Replacement nonroad equipment, locomotives and marine vessels must be powered by engines certified to EPA and/or CARB emission standards. However, zero tailpipe emissions nonroad equipment, marine vessels, and locomotives do not require EPA or CARB certification. EPA's annual certification data for vehicles, engines, and equipment may be found at EPA's Annual Certification Data for Vehicles, Engines, and Equipment website. EPA's engine emission standards may be found at EPA's All EPA Emission Standards website. Engines certified by CARB may be found by searching CARB's Executive Orders for Heavy-duty Engines and Vehicles, found on CARB's New Vehicle and Engine Certification website. Information on low NOx engines can be found at EPA's Low NOx Certified Engine Factsheet.
2) The replacement vehicle or equipment must be of similar type and gross vehicle weight rating or horsepower as the vehicle, engine, or equipment being replaced.
   a. Nonroad: Horsepower increases of more than 40 percent require specific approval by EPA prior to purchase, and the recipient may be required to pay the additional costs associated with the higher horsepower equipment.
   b. Highway: The replacement vehicle must not be in a larger weight class than the existing vehicle. Exceptions may be granted for vocational purposes and require specific EPA approval prior to purchase.
3) The replacement vehicle, engine, or equipment must continue to perform similar function and operation as the vehicle, engine, or equipment that is being replaced.
4) The replacement vehicle must resemble the replaced vehicle in form and function. The cost of optional components or "add-ons" that significantly increase the cost of the vehicle may not be eligible for funding under the grant.

For information on battery electric powered projects and other solutions, please refer to Section X, Subsection D of the 2023-2024 DERA State Guide.

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If one of the provided diesel emission reduction strategies is compatible with your project goals, please verify the specified solution is eligible for your vehicle, engine, and/or equipment by reviewing the applicable table below (Section X, Tables 4, 5, 6, and 7 of 2023-2024 DERA State Guide).

Medium and Heavy-Duty Truck, Transit Bus, and School Bus Project Eligibility

Current Engine Model Year (EMY)	DOC +/- CCV	DPF	SCR	Verified Idle Reduction, Tires, or Aerodynamics	Vehicle or Engine Replacement: EMY 2021+ (2017+ for Drayage)	Vehicle or Engine Replacement: EMY 2021+ Zero Emission[2] or Low-NO_x[3]	Clean Alternative Fuel Conversion
older - 2006	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2007 - 2009	No	No	Yes	Yes[1]	Yes	Yes	Yes
2010 - newer	No	No	No	Yes[1]	No	Yes	Yes

[1] Auxiliary power units and generators are not eligible on vehicles with EMY 2007 or newer.
[2] Eligible fuel cell projects are limited to hydrogen fuel cell engine replacements for eligible urban transit buses, shuttle buses and drayage trucks, and hydrogen fuel cell vehicle replacements for eligible urban transit buses, shuttle buses, and drayage trucks.
[3] Please see the Low-NOx Engine Factsheet found on the DERA website for guidance on identifying engines certified to meet CARB's Optional Low NOx Standards.

Non-road Vehicle/Equipment and Engine Project Eligibility

Current Engine Tier	Vehicle/Equipment Replacement					Verified Retrofit
	Compression Ignition			Spark Ignition	Zero Emission[3]	
	Tier 0-2	Tier 3-4i	Tier 4	Tier 2		
Unregulated – Tier 2	No	Yes[1]	Yes	Yes	Yes	Yes
Tier 3	No	No	Yes	Yes	Yes	Yes
Tier 4	No	No	No	No	Yes	No

Current Engine Tier	Engine Replacement					Verified Engine Upgrade
	Compression Ignition			Spark Ignition	Zero Emission[4]	
	Tier 0-2	Tier 3-4i	Tier 4	Tier 2		
Unregulated – Tier 2	No	Yes[2]	Yes	Yes	Yes	Yes
Tier 3	No	No	Yes	Yes	Yes	Yes
Tier 4	No	No	No	No	Yes	No

[1] Tier 3 and Tier 4 interim (4i) allowed for vehicle/equipment replacement only when Tier 4 final is not yet available from OEM for 2021 model year equipment under the Transition Program for Equipment Manufacturers (TPEM).
[2] Tier 3 and Tier 4i engines may be used for engine replacement only if Tier 4 is demonstrated to not be available or feasible through a best achievable technology analysis as defined in Section X.B., below.

[3] Eligible fuel cell projects are limited to hydrogen fuel cell equipment replacements for eligible terminal tractors/yard hostlers, stationary generators, and forklifts.
[4] Fuel cell engine replacement is not eligible.

Locomotive Engine Project Eligibility

Current Locomotive Tier	Engine & Locomotive Replacement				Verified Retrofit	Idle Reduction[2] Technology	Certified Remanufacture System[4]
	Tier 0-2+	Tier 3	Tier 4	Zero Emission[1]			
Unregulated – Tier 2+	No	Yes[3]	Yes	Yes	Yes	Yes	Yes
Tier 3	No	No	Yes	Yes	Yes	Yes	Yes
Tier 4	No	No	No	No	No	Yes	No

[1] Fuel cell engine and locomotive replacements are not eligible.
[2] Automatic engine start-stop technologies are only eligible to be installed on locomotives currently certified to Tier 0 or unregulated, subject to the restriction on mandated measures.
[3] Tier 3 engines may be used for engine replacement only if Tier 4 is demonstrated to not be available or feasible through a best achievable technology analysis as defined in Section X.B. Tier 3 is not eligible for locomotive replacement.
[4] Some locomotive engine projects may be subject to the restriction on mandated measures.

Note: Tier 0+, Tier 1+, Tier 2+, Tier 3, and Tier 4 represent locomotives manufactured or remanufactured under the more stringent Tier standards promulgated under the 2008 (current) locomotive and marine rule. Tier 0, Tier 1, and Tier 2 represent locomotives originally manufactured or remanufactured under the less stringent Tier standards promulgated in 1997.

Marine Engine Project Eligibility

Engine Category	Horse-power	Current Engine Tier	Engine and Vessel Replacement					Certified Remanuf-acture System[3]	Verified Engine Upgrade
			Compression Ignition			Spark Ignition	Zero Emis-sion[2]		
			Tier 1-2	Tier 3	Tier 4				
C1, C2	<803	Un-regulated – Tier 2	No	Yes	No	Yes	Yes	Yes	Yes

C1, C2	≥804	Un-regulated – Tier 2	No	Yes[1]	Yes	Yes	Yes	Yes	Yes
C1, C2	<803	Tier 3	No	No	No	Yes	Yes	No	No
C1, C2	≥804	Tier 3	No	No	Yes	Yes	Yes	No	No
C1, C2	≥804	Tier 4	No	No	No	No	No	No	No
C3	All	Un-regulated - Tier 2	No	Yes	No	No	No	No	No
C3	All	Tier 3	No	No	No	No	No	No	No

[1]Tier 3 engines may be used for engine replacement only if Tier 4 is demonstrated to not be available or feasible through a best achievable technology analysis as defined in Section X.B., below. Over 800 HP, Tier 3 engines are not eligible for full vessel replacement.

[2] Fuel cell engine and vessel replacements are not eligible.

[3] Some marine engine projects may be subject to the restriction on mandated measures.

Mandatory Cost-Share and DERA Funding:

The following table provides the maximum percentage of DERA funds that can be contributed to a specified project (Section XI, Table 8 of 2023-2024 DERA State Guide).

Eligible Technologies	EPA Funding Limit	Mandatory Cost Share
Drayage Truck Replacement	50%	50%
Vehicle or Equipment Replacement with EPA Certified Engine	25%	75%
Vehicle or Equipment Replacement with CARB Certified Low NOx Engine	35%	65%
Vehicle or Equipment Replacement with Zero-tailpipe Emission Power Source	45%	55%
Engine Replacement with EPA Certified Engine	40%	60%
Engine Replacement with CARB Certified Low NOx Engine	50%	50%
Engine Replacement with Zero-tailpipe Emission Power Source	60%	40%
EPA Certified Remanufacture Systems	100%	0%

EPA Verified Highway Idle Reduction Technologies when combined with new or previously installed exhaust aftertreatment retrofit	100%	0%
EPA Verified Highway Idle Reduction Technologies without new exhaust after-treatment retrofit	25%	75%
EPA Verified Locomotive Idle Reduction Technologies	40%	60%
EPA Verified Marine Shore Connection Systems	25%	75%
EPA Verified Electrified Parking Space Technologies	30%	70%
EPA Verified Exhaust After-treatment Retrofits	100%	0%
EPA Verified Engine Upgrade Retrofits	100%	0%
EPA Verified Hybrid Retrofit Systems	60%	40%
EPA Verified Fuel and Additive Retrofits when combined with new retrofit, upgrade, or replacement	Cost differential between conventional diesel fuel	Cost of conventional diesel fuel
EPA Verified Aerodynamics and Low Rolling Resistance Tires when combined with new exhaust after-treatment retrofit	100%	0%
Alternative Fuel Conversion	40%	60%