

Applicant Information

Organization/ Applicant Name	FirstName	LastName	JobTitle	Address	City	State	Email Address	ZipCode	OfficePhone	OfficePhone Ext

Project 1 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit

Fleet 1 Information:

Current Vehicle Information														New Vehicle/Technology Information																							
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Make	Engine Model	Engine Family Name (If unregulated, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level (Nonroad)	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Miles per vehicle (Highway)	Annual Usage Rate (Hours per engine) (Nonroad)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	New Tier Level (Nonroad replacements/ Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Installation Cost							

Copy and paste additional lines as necessary to capture project fleet information.

Project 2 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit

Fleet 2 Information:

Current Vehicle Information														New Vehicle/Technology Information																										
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Make	Engine Model	Engine Family Name (If unregulated, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level (Nonroad)	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Miles per vehicle (Highway)	Annual Usage Rate (Hours per engine) (Nonroad)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	New Tier Level (Nonroad replacements/ Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Installation Cost										

Copy and paste additional lines as necessary to capture project fleet information.

Project 3 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit

Fleet 3 Information:

Current Vehicle Information														New Vehicle/Technology Information																									
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Make	Engine Model	Engine Family Name (If unregulated, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level (Nonroad)	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Miles per vehicle (Highway)	Annual Usage Rate (Hours per engine) (Nonroad)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	New Tier Level (Nonroad replacements/ Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Installation Cost									

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Project 1 Information

ProjectName	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
		Marine									

Fleet 1 Information for MARINE VESSELS ONLY

Current Vessel Information																		New Vessel/Technology Information																
Sector	Application	Boat Name or Other Identifier	Total Number of Engines per Vessel	Engine Type	Serial # of Engine	Engine Make	Engine Model	Engine Family Name (If unregulated engine, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Usage Rate (Hours per engine)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	New Tier Level (Replacements/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost			
Marine																																		
Marine																																		
Marine																																		
Marine																																		

Copy and paste additional lines as necessary to capture project fleet information.

Project 2 Information

ProjectName	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
		Marine									

Fleet 2 Information for MARINE VESSELS ONLY

Current Vessel Information																		New Vessel/Technology Information																	
Sector	Application	Boat Name or Other Identifier	Total Number of Engines per Vessel	Engine Type	Serial # of Engine	Engine Make	Engine Model	Engine Family Name (If unregulated engine, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Usage Rate (Hours per engine)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	New Tier Level (Replacements/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost				
Marine																																			
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Copy and paste additional lines as necessary to capture project fleet information.

Please replicate the Project and Fleet Information Tables as necessary for additional Projects/Fleets.

The following instructions explain how to fill out the Fleet Description tab and the Marine Vessels tab.
Each tab is divided into three sections: Recipient Information, Project Information, and Fleet Information.
Below is an explanation of each field.
For an example of how the Applicant Fleet Description spreadsheet should be filled out, please refer to the tab labeled 'Example'.

Applicant Information should only be filled out only once.

Project Information and Fleet Information should be filled out for each separate "project" within the proposal.

Separate projects are generally defined as separate subgrants to various entities, or separate, distinct target fleets within the grant or subgrants.

Fleet Information should be cumulative, and include all affected engines, vehicles, and retrofits proposed as part of the project.

Applicant Information

Organization/ Applicant Name- Enter the name of the organization applying for the grant from EPA (regardless of who actually uses the funds).

First Name- Enter the FIRST name of the contact person for the application.

Last Name- Enter the LAST name of the contact person for the application.

Job Title- Enter the Job Title of the contact person for the application.

Email Address- Enter the email address of the contact person for the application.

Address- Enter the address of the contact person for the application.

City- Enter the city of the contact person for the application.

State- Enter the two letter postal code of the contact person for the application.

Zip Code- Enter the zip code of the contact person for the application.

Office Phone- Enter the phone number of the contact person for the application.

OfficePhoneExt- Enter the extension of the contact person for the application (if applicable).

Project Information

Project Name- Enter the name of the project (try to include both the Organization Name and Fleet(s)).

Organization Performing Project- Enter the name of the organization performing the project (this could be the Prime Organization/Applicant or a Subgrantee).

Target Fleet- Select from the dropdown menu provided the target fleet to be addressed.

Number of Vehicles- Enter the number of vehicles to be addressed.

City- Enter the city in which the project will take place.

County- Enter the county in which the project will take place.

State- Enter the two letter postal code for the state in which the project will take place.

Funding Amount - Enter the total amount of Federal funds to be committed to the project

Additional Funding Source- If there are to be matching funds, enter the source.

Additional Funding Amount- Enter the amount of funds provided.

Public Benefit - If the vehicles are part of a public fleet or benefit the public (i.e. drayage vehicles that serve a port; private construction equipment contracted to a public works project, etc) enter "yes", otherwise enter "no".

Fleet Information

Vehicles can be combined on one line if all the information is the same. Please see the Example tab.

Vehicle Type- Enter the vehicle type, either "On Highway" "NonRoad".

Target Fleet- Select the target fleet from the dropdown menu.

Class/Equipment- Select from the dropdown menu the Vehicle Class or type of nonroad equipment.

Serial/VIN # Enter the Serial number or VIN number of the engine or vehicle

Engine Make- Enter the manufacturer of the existing Engine.

Engine Model- Enter the model of the existing Engine.

Engine Family Name- Enter the Engine Family name of the existing Engine. NOTE: unregulated engines will not have an Engine Family Name.

Instructions

Engine Family Name information is optional for Idle Reduction projects.

- Engine Model Year-** Enter the model year of this engine set.
- Horsepower-** For NONROAD ONLY, Enter the average horsepower of the equipment.
- Displacement per cylinder** Enter the engine displacement per cylinder in liters.
- Current Tier Level-** For NONROAD REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the Current Tier Level.
- Current Standard Level -** For NONROAD AND ON-HIGHWAY REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the current emission standard levels of the engine for PM and NOx or NMHC+NOx.
- Current Fuel Type-** Select the type of fuel that is currently being used (prior to any clean diesel activity change).
- Amount of Fuel Used-** Enter the amount of fuel used in gallons/year.
- Annual Miles-** For ON-HIGHWAY ONLY, Enter the average number of vehicle miles traveled per year per vehicle.
- Annual Usage Rate Hours-** For NONROAD ONLY, Enter the average number of hours the equipment is used per year.
- Annual Idling Hours-** For ON-HIGHWAY ONLY, Enter the average number of hours the vehicle idles per year.
- Year of Retrofit Action-** Enter the year in which the retrofit will take place (i.e., if in 2010, you're replacing a 1995 bus with a 2007 bus, the retrofit year is 2010.)
- Technology Type-** Enter the type of technology to be used. Example: Diesel Particulate Filter, Replacement
- Technology Make-** Enter the make of the technology. Example: Donaldson, Caterpillar.
- Verified Technology Model-** Enter the model of the technology as identified on the EPA/CARB verification lists (i.e. Johnson Matthey ACCRT, Carrier Transicold - Comfortpro, etc.) to confirm a verified technology was used.
 This is applicable for exhaust retrofits, upgrades, and idle reduction technologies.
 Verified Technology Model may not be known for the initial application, pending the bid process, and would be noted as TBD.
- New Engine Family Name-** For REPLACEMENTS AND REPOWERS ONLY, Enter the Engine Family Name of the new engine.
- New Engine Model Year-** For REPLACEMENTS AND REPOWERS ONLY, Enter the model year of the new vehicle/engine.
- New Horsepower-** For NONROAD ONLY, Enter the average horsepower of the equipment.
- New Displacement per cylinder** Enter the engine displacement per cylinder in liters.
- New Tier Level-** For NONROAD REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the new Tier Level.
- New Standard Level-** For NONROAD AND ON-HIGHWAY REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the new emission standard levels of the engine for PM and NOx or NMHC+NOx.
- New Fuel Type-** Select the new type of fuel that is being used.
- Annual Idling Hours reduced-** For IDLE REDUCTION STRATEGIES ONLY, Enter the average number of idling hours reduced for the engine.
- Technology Unit Cost-** Enter the dollar amount of the technology per unit.
- Technology Unit Installation-** Enter the cost of installing the technology per unit.

Marine Vessels

- Sector-** This field will always read marine.
- Application-** Select the target vessel.
- Boat Name-** Enter the boat name or other identifier of the vessel
- Number of Engines per Vessel-** Enter the total number of engines on the vessel including auxiliary and propulsion. The max number of engines allowed per vessel is 5.
- Engine Type-** Identify which engines are propulsion and which are auxiliary.
- VIN/Serial # -** For Repower and Vehicle Replacement Projects, Enter the VIN or engine Serial # for each scrapped/replaced vehicle or engine.
- Engine Make-** Enter the manufacturer of the existing Engine.
- Engine Model-** Enter the model of the existing Engine.
- Engine Family Name-** Enter the Engine Family Name for each engine. Unregulated engines will not have an Engine Family Name.
- Engine Model Year-** Enter the model year of the existing engine.
- Horsepower-** Enter the horsepower of the existing engine.
- Displacement per cylinder** Select from the dropdown menu the displacement per cylinder in liters.
- Current Tier Level-** For REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the Current Tier Level.
- Current Standard Levels-** For REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the current emission standard levels of the engine for PM and NOx

or NMHC+NOx.

- Current Fuel Type-** Select the type of fuel that is currently being used (prior to any clean diesel activity change).
- Amount of Fuel Used-** Enter the amount of fuel used in gallons/year for the engine.
- Annual Usage Rate Hours-** Enter the average number of hours the engine is used per year.
- Annual Idling Hours per Engine-** Enter the idling hours for the engine in a given year.
- Year of Retrofit Action** Enter the year in which the retrofit will take place (i.e. If in 2010, you're upgrading a Tier 0 engine to Tier 1, then the retrofit year is 2010)
- Technology Type-** Enter the type of technology to be used. Example: Diesel Oxidation Catalyst, Shore Power, Engine Repower, etc.
- Technology Make-** Enter the make of the technology. Example: Donaldson, Caterpillar.
- Verified Technology Model-** Enter the model of the technology if available (i.e. Johnson Matthey PCRT).
- New Engine Family Name-** For REPLACEMENTS AND REPOWERS ONLY, Enter the Engine Family name of the new engine.
- New Engine Model Year-** For REPLACEMENTS AND REPOWERS ONLY, Enter the model year of the new engine.
- Horsepower-** Enter the horsepower of the new engine.
- Displacement per cylinder** Select from the dropdown menu the displacement per cylinder in liters.
- New Engine Tier Level-** For REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the new Tier Level.
- New Standard Levels-** For REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the new emission standard levels of the engine for PM and NOx or NMHC+NOx.
- New Fuel Type-** Select the new type of fuel that is being used.
- Annual Idling Hours reduced-** For IDLE REDUCTION STRATEGIES ONLY, Enter the number of idling hours reduced as a result of this technology.
- Technology Unit Cost-** Enter the cost of the technology per unit.
- Technology Unit Installation-** Enter the cost of installing the technology per unit.

Applicant Information

Organization/ Applicant Name	FirstName	LastName	JobTitle	Address	City	State	Email Address	ZipCode	OfficePhone	OfficePhone Ext
State Environmental Department	John	Doe	Grants Administrator	123 State Road	Anycity	OR	youremail@dc	98765	123-456-7890	

Project 1 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
Implementation of Certified Clean Diesel Technologies at the Port of Anycity; Dray Truck Sector	Individual Dray Truckers	Ports and Airports	24	Anycity	Anycounty	OR	10	\$320,574	0	\$2,000	yes

Fleet 1 Information:

Current Vehicle Information														New Vehicle/Technology Information																
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Make	Engine Model	Engine Family Name (If unregulated, then NA)	Engine Model Year	Horsepower (Nonroad Only)	Displacement per Cylinder (Liters)	Current Tier Level (Nonroad)	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Miles per vehicle (Highway)	Annual Usage Rate (Hours per engine) (Nonroad)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers/ Upgrades)	New Tier Level (Nonroad replacements/ Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost
On Highway	Ports and Airports	Class 8A		Caterpillar	3406	TCP403DZDABA	1994				PM-2.5 annual standard: 5 µg/m3 annually; Nox - 0.1 µg/m3	Diesel (ULSD), 15 ppm	4500	28834		260	2011	Diesel Oxidation Catalyst	Engine Control Systems	AZ Pumuffler						PM-2.5 annual standard: 5 µg/m3 annually; Nox - 0.1 µg/m3	Diesel (ULSD), 15 ppm		2369	510
On Highway	Ports and Airports	Class 8A		Cummins	M11 350 E	TCE359D6DAAA	1994				PM-2.5 annual standard: 5 µg/m3 annually; Nox - 0.1 µg/m3	Diesel (ULSD), 15 ppm	8045	40384		500	2011	Diesel Particulate Filter	Engine Control Systems	Purifier Plus						PM-2.5 annual standard: 5 µg/m3 annually; Nox - 0.1 µg/m3	Diesel (ULSD), 15 ppm	15558.55	3910	

Project 2 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
Marine Ferry & Tug Repower Project	XYZ Towing & Transportation Company	Marine	2	Anycity	Anycounty	OR	10	\$1,500,000	XYZ Towing & Transportation Company	\$1,000,000	yes

Fleet 2 Information for MARINE VESSELS ONLY

Current Vessel Information														New Vessel/Technology Information																	
Sector	Application	Boat Name or Other Identifier	Total Number of Engines per Vessel	Engine Type	Serial # of Engine	Engine Make	Engine Model	Engine Family Name (If unregulated engine, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	Annual Usage Rate (Hours per engine)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	New Tier Level (Replacements/ Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost
Marine	Tug Boat/ Tow Boat	Tug#1	4	propulsion	76HI-1234			NA	1975	1950	5.0<= size <15.0	Tier 0	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm	140000			2013	Engine Repower	EMD	8-710G7C-T2	4GMXM06459E2	2012	2500	5.0<= size <15.0	Tier 2	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm			
				propulsion	76HI-5678			NA	1975	1950	5.0<= size <15.0	Tier 0	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm	140000			2013	Engine Repower	EMD	8-710G7C-T2	4GMXM06459E2	2012	2500	5.0<= size <15.0	Tier 2	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm			
				auxiliary				NA	1975	200	0.9 <= size < 1.2	Tier 0	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm	30000			2013	Vehicle/Equipment Replacement	John Deere	CKM100DM3	BJDXL02_4074	2012	200	1.2 <= size <2.5	Tier 2	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm			
				auxiliary				NA	1975	200	0.9 <= size < 1.2	Tier 0	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm	30000			2013	Vehicle/Equipment Replacement	John Deere	CKM100DM3	BJDXL02_4074	2012	200	1.2 <= size <2.5	Tier 2	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm			
				propulsion	16VF012345			NA	1995	1100	1.2 <= size <2.5	Tier 0	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm	150000			2013	Engine Repower	MTU	10V2000M72	BMDDL14.02WK	2012	1100	5.0<= size <15.0	Tier 2	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm			

Marine	Tug Boat/ Tow Boat	Tug#2	2	propulsion	16VF012346	NA	1995	1100	1.2 <= size <2.5	Tier 0	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm	150000	2013	Engine Repower	MTU	10V2000M72	BMDDL14.0ZWK	2012	1100	5.0<= size <15.0	Tier 2	Nox standard: 9.2; PM standard: 0.5	Diesel (LSD), 500 ppm					

DO NOT MODIFY THIS PAGE AT ALL!						
Region	Model Year	States	Fleet Type			
1	1970	AK	Ports and Airports			Vehicle Type
2	1971	AL	Rail			Vehicle Class or Type of Nonroad Equipment
3	1972	AZ	Drayage/Short Haul			On Highway
4	1973	AR	Marine			NonRoad
5	1974	CA	Stationary			Class 5
6	1975	CO	Other			Class 6
7	1976	CT				Class 7
8	1977	DE				Class 8A
9	1978	DC				public fleet
10	1979	FL				yes
	1980	GA				no
	1981	HI				Aerial Lifts
	1982	ID				Cranes
	1983	IL				Ferries
	1984	IN				Forklifts
	1985	IA				Fuel
	1986	KS				Diesel (ULSD), 15 ppm
	1987	KY				Diesel (LSD), 500 ppm
	1988	LA				Diesel, 3,400 ppm
	1989	MA				Biodiesel 100
	1990	ME				Biodiesel 20
	1991	MD				Biodiesel 5
	1992	MH				LPG
	1993	MI				LNG
	1994	MN	Tiers			CNG (lbs)
	1995	MS	unregulated			CNG (ft3)
	1996	MO	Tier 0			E85
	1997	MT	Tier 1			Emulsion
	1998	NE	Tier 2			Other General Industrial Equipment
	1999	NV	Tier 3			Other Material Handling Equipment
	2000	NH	Tier 4			Railway Maintenance
	2001	NJ	Tier 0+			Terminal Tractors
	2002	NM	Tier 1+			Tractors/Loaders/Backhoes
	2003	NY	Tier 2+			
	2004	NC				

Technology	Marine Application	Engine Type	Displacement per cylinder
Diesel Oxidation Catalyst	Container	auxilliary	size < 0.9
Diesel Oxidation Catalyst + B20	Ferry/Excursion	propulsion	0.9 <= size < 1.2
Diesel Oxidation Catalyst + B100	Tug Boat/ Tow Boat		1.2 <= size <2.5
Diesel Oxidation Catalyst + Closed Crankcase Ventilation +B20	Commercial Fishing		2.5<= size <3.5
Diesel Oxidation Catalyst + Closed Crankcase Ventilation + B100	Commercial Charter Fishing		2.5<= size <5.0
Diesel Oxidation Catalyst + Emulsion	Crew and Supply		5.0<= size <15.0
Diesel Particulate Filter	Pilot		15.0<= size <20.0
Diesel Oxidation Catalyst + Closed Crankcase Ventilation	Work Boat		20.0<= size <25.0
Diesel Particulate Filter + Closed Crankcase Ventilation	Other		25.0<= size <30.0
Diesel Oxidation Catalyst + Closed Crankcase Ventilation + ULSD (for Nonroad only)			
Diesel Oxidation Catalyst + ULSD (for Nonroad only)			
Partial Flow Filter			
Lean NO _x Catalyst/Diesel Particulate Filter			
Selective Catalytic Reduction			
Exhaust Gas Recirculation + Diesel Particulate Filter			
Ultra Low Sulfur Diesel (ULSD)			
Compressed Natural Gas			
Liquid Natural Gas			
Biodiesel (B20)			
Biodiesel (B100)			
Hybrid			
Hybrid Electric Replacement with Diesel Particulate Filter			
Compressed Natural Gas (CNG) Replacement			
Alternative Fuel Conversion			
Verified Engine Upgrade Kit			
Certified Remanufacture System			
Engine Repower			
Vehicle/Equipment Replacement			
Shutdown/Startup for Locomotives			
Shore Connection System (Marine)			
Shore Connection System (Locomotive)			
Generator Set			
Engine Shutdown			
Other			

