

Information

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

Project 1 Information

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

Fleet 1

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						Curre	nt Vehicle Inforn	nation												N∈	w Vehicle/Tech	nology Informa	tion					
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Model	Engine Family Name (If unregulated, then NA)		Horsepower	Displacement per Cylinder (Liters)	· Current Tier Level (Nonroad)	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Used	Annual Miles per vehicle	per engine)	Idling Hours (per	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements, Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	(Replacements/	Displacement per Cylinder (Liters) (Replacements/	New Tier Level (Nonroad replacements/ Repowers/ Upgrades)	New Standard Level for	New Fuel	Annual Idling Hours Reduced (per engine)	Technology	Technology Unit Installation Cost
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Project 2

Information

Project Name Project TargetFleet Vehicles City County State Region Funding Amount Funding Source Funding Amount		Performing		Number of						Additional	Additional	
	Project Name	Project	TargetFleet	Vehicles	City	County	State	Region	Funding Amount	Funding Source	Funding Amount	F

Fleet 2 Information:

							Currer	nt Vehicle Inform	nation													Ne	w Vehicle/Tech	nology Informa	tion					
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)	n 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	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	Technolog Unit Installation Cost
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Project 3

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

Fleet 3 Information:

							Currer	nt Vehicle Inform	nation													Ne	w Vehicle/Tech	nology Informa	tion					
Vehicle Type	TargetFleet		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 Used		Annual Usage Rate (Hours per engine) (Nonroad)	Idling	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/	New Engine Model Year (Replacements/ Repowers/ Upgrades)			(Nonroad replacements/	New Standard Level for		Annual Idling Hours Reduced (per engine)		Technolog Unit Installation Cost
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### Project 4 Information

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

### Fleet 4 Information:

							Curre	nt Vehicle Inforn	nation													Ne	w Vehicle/Tech	nology Informa	tion					
Vehicle Type	TargetFleet		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	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	New Fuel Type	Annual Idling Hours Reduced (per engine)		Technology Unit Installation Cost
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# Project 5

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

### Fleet 5 Information:

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						Currer	nt Vehicle Inform	ation											Ne	w Vehicle/Tech	nology Informa	tion				
Vehicle Type	TargetFleet	Serial and/or VIN # of engine and/or vehicle		Engine Model	Engine Family Name (If unregulated, then NA)	Engine Model Year	Horsepower	Displacement per Current Tier L Cylinder (Liters) (Nonroad)	t	Fuel Used	per vehicle	Annual Usage Rate (Hours per engine) (Nonroad)	Idling Hours (per	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	Horsepower	Displacement per	replacements/	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology	Technolog Unit Installation Cost
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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.



### Applicant Information

Organization/										OfficePhoneE
Applicant Name	FirstName	LastName	JobTitle	Address	City	State	EmailAddress	ZipCode	OfficePhone	xt

Project 1 Information

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

Fleet 1 Information for MARINE VESSELS ONLY

								Current Vess	sel Information	n													New	Vessel/Technology	ogy Information						
Sector	Application	Boat Name or Other Identifier	Total Number of Engines per Vessel	Engine Type	Serial # of Engine	Engine Make	Engine Model	Name (If unregulated engine, then NA)		Horsepower	Displacement per Cylinder (Liters)	Current Tier Level	Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fue 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)	Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	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
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Project 2 Information

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

Fleet 2 Information for MARINE VESSELS ONLY

								Current Ves	sel Informatio	n													New	/essel/Technolo	gy Information						
Sector	Application	Boat Name or Other Identifier	Total Number of Engines per Vessel	Engine Type	Serial # of Engine	Engine Make	Engine Model	Name (If unregulated engine, then NA)	Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level	Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fue 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)	Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	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																															
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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. a private school bus company contracted by a public school; 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 exisiting Engine.

Engine Model- Enter the model of the exisiting Engine.

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

Engine Family Name information is optional for Idle Reduction, Aerodynamic Technology, Low Rolling Resistance Tires, and Fuels 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, Biodiesel 100

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, idle reduction technologies, aerodynamics and low rolling resistant tires. 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 exisiting Engine.

**Engine Model-** Enter the model of the exisiting 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
			General							
			Services				Jeannie.Wils			
Village of			Fleet				on@vos.nsn.			
Springfield	Jeannie	Wilson	Manager	P.O. Box 270	Springfield	MO	gov	65102	573-555-1199	

# 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
VOS Dept of Transport Retrofits	Springfield Department of Environmental Quality	Other	2	St. Louis		мо	7		In-kind contribution from VODDEQ	\$2,000	yes

# Fleet 1 Information:

							Current	t Vehicle Inforn	nation													New \	/ehicle/Techno	logy Informa	ation					
																								Displacemen	New Tier					
																						New Engine		t per Cylinder	Level					4
			Serial and/or VIN # of			Engine Family Name (If					Current Standard Level for PM and		Amount of	Annual Miles	Annual Usage		Year of					Model Year	New Engine	(Liters)	(Nonroad	Now Stondard Loyal for		Annual Idling		Technology
		Class/	engine and/or			unregulated, then	Engine Model		Displacement per				Fuel Used	per vehicle		Hours (per		Technology	Technology	Verified		(Replacements/ Renowers/	Horsepower (Replacements/	(Replacemen	s/ Renowers/	PM and NOx or	New Fuel	Hours Reduced	Technology	v Installation
Vehicle Type	TargetFleet	Equipment	vehicle	Engine Make	Engine Model	NA)	Year	Horsepower	Cylinder (Liters)	(Nonroad)	NMHC+NOx	Fuel Type	(gal/year)	(Highway)	(Nonroad)	engine)	Action	Type	Make	Technology Model	Repowers)	Upgrades)	Repowers)	Repowers)	Upgrades)	NMHC+NOx	Type	(per engine)	Unit Cost	Cost
												Diesel						Diesel												1
	City/County	Dumpers/Ten									PM: 0.10, NOx:	(ULSD), 15						Oxidation												
On Highway	vehicle	ders	#7M001145	International	DT466	2NVXH0466ANA	2002	300	7.6		4.0 g/bhp-hr	ppm	8000			800	2009	Catalyst	Donaldson	Series 6100 DOC										
												Diesel						Diesel												
	City/County										PM: 0.10, NOx:							Oxidation	Johnson											
On Highway	vehicle	ders	#MVA26679	International	DT466	2NVXH0466ANA	2002	300	7.6		4.0 g/bhp-hr	ppm	8000			800	2009	Catalyst	Matthey	CRT3		1	1	I	I	1				

# 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
	Springfield										
	Department of								In-kind		
Transport	Environmental								contribution from		
Retrofits	Quality	Construction	2	Springfield		MO	7	\$111,478	MODOT	\$2,400	yes

# Fleet 2

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			Serial and/or			Engine Family					Current Standard				Annual Usage							Model Year	New Engine	(Liters)	(Nonroad					Technology
			VIN # of			Name (If					Level for PM and		Amount of	Annual Miles	Rate (Hours	Idling	Year of				Family Name	(Replacements/	Horsepower	(Replacemen	replacement	New Standard Level for		Annual Idling		Unit
		Class/	engine and/or			unregulated, then	Engine Model		Displacement per	Current Tier Level	NOx or						Retrofit	Technology	Technology	Verified	(Replacements/	Repowers/	(Replacements/	ts/	s/ Repowers/	PM and NOx or	New Fuel	Hours Reduced	Technology	v Installation
Vehicle Type	TargetFleet	Equipment	vehicle	Engine Make	Engine Model	NA)	Year	Horsepower	Cylinder (Liters)	(Nonroad)	NMHC+NOx	Fuel Type	(gal/year)	(Highway)	(Nonroad)	engine)	Action	Type		Technology Model	Repowers)	Upgrades)	Repowers)	Repowers)	Upgrades)	NMHC+NOx	Type		Unit Cost	
		Tractors/Load	#8GT1429IA			WDWXL03.3AM					PM: N/A, NOx: 9.2	Diesel (LSD),						Biodiesel									Biodiesel			1
NonRoad	Construction	ers/Backhoes	10871	John Deere	DB33A	N	1998	62		Tier 1	g/kW-hr	500 ppm	14000		300		2009	(B20)									20			
																											Diesel			
			#BWK03091									Diesel (LSD),						Engine								PM: 0.40, NMHC+NOx:	(LSD), 500			
NonRoad	Construction	Aerial Lifts	98722	New Holland			1995	80		Tier 0		500 ppm	2700		250		2009		New Holland			2008	300		Tier 3	4.7 g/kW-hr	nom			

# Project 3 Information

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Project Name	Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
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Marine Ferry &	XYZ Towing &							ľ	XYZ Towing &	i l	
Tug Repower	Transportation							i I	Transportation	i l	
Project	Company	Marine	2	New York		NY	2	\$1,500,000	Company	\$1,000,000	yes

# Fleet 3 Information for MARINE VESSELS ONLY

Fleet 3 Infor	mation for MARI	INE VESSELS	UNLT																												
								Current Vessel	Information														New \	/essel/Techi	nology Infor	mation					
Sector		Boat Name or Other Identifie			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 r and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)	(Hours per	Annual Idling Hours (per engine)		Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacemen ts/	(Liters)	New Tier Level (Replacements/ Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NO x	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit
				propulsion	76HI-1234				1975	1950	5.0<= size <15.0	Tier 0		Diesel (LSD), 500 ppm	140000			2011	Engine Repower	EMD	8-710G7C-T2		2010			Tier 2					
				propulsion	76HI-5678				1975	1950	5.0<= size <15.0	Tier 0		Diesel (LSD), 500 ppm	140000			2011		EMD	8-710G7C-T2		2010			Tier 2					
				auxilliary					1975	200	0.9 <= size < 1.2	Tier 0		Diesel (LSD), 500 ppm	30000			2011	Vehicle/Equip ment Replacement	John Deere	CKM100DM3		2010			Tier 2					
	Tug Boat/ Tow	,		auxilliary					1975	200	0.9 <= size < 1.2	Tier 0		Diesel (LSD), 500 ppm	30000			2011	Vehicle/Equip ment Replacement	John Deere	CKM100DM3		2010			Tier 2					
Marine	Boat	Tug#1	4	,																											
				propulsion	16VF012345				1995	1100	1.2 <= size <2.5	Tier 0		Diesel (LSD), 500 ppm Diesel (LSD),	150000			2011	Engine Repower	MTU	10V2000M72		2010			Tier 2					
				propulsion	16VF012346				1995	1100	1.2 <= size <2.5	Tier 0		Diesel (LSD), 500 ppm	150000			2011	Engine Repower	MTU	10V2000M72		2010			Tier 2					
	T Door! (T				ļ	-							+		1												1				
Marine	Tug Boat/ Tow Boat	Tua#2	2												†																



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	Model	יו טע		IS FAGE AT ALL:	Vehicle Class or Type
Region		State	Fleet Type	Vehicle Type	of Nonroad Equipment
1	1970	AK	School Bus	On Highway	Class 5
2	1971	AL	Ports and Airports	NonRoad	Class 6
3	1972	ΑZ	Construction		Class 7
4	1973	AR	Delivery Truck		Class 8A
5	1974	CA	Transit Bus	public fleet	Class 8B
6	1975	CO	Rail	yes	School Bus
7	1976	CT	Refuse Hauler	no	Transit Bus
8	1977	DE	Utility Vehicle		-
9	1978	DC	Long Haul		2-Wheel Tractors
10	1979	FL	Short Haul		ACRefrigeration
	1980	GA	Agriculture	Fuel	Aerial Lifts
	1981	HI	Mining	Diesel (ULSD), 15 ppm	Agricultural Mowers
	1982	ID	Marine	Diesel (LSD), 500 ppm	Agricultural Tractors
	1983	IL.	Stationary	Diesel, 3,400 ppm	Airport Support Equipment
	1984	IN	City/County vehicle		Balers
	1985	IA	Emergency vehicle	Biodiesel 20	Bore/Drill Rigs
	1986	KS	Other	Biodiesel 5	Cement & Mortar Mixers
	1987 1988	ΚY		LPG LNG	Combines Concrete/Industrial Saws
-	1988 1989	LA MA		CNG (lbs)	Cranes
-	1989	ME		CNG (ft3)	Crawler Tractors
	1990	MD		E85	Crushing/Proc. Equipment
	1991	MH		Emulsion	Dumpers/Tenders
	1992	MI		LITIGISIOTI	Excavators
	1994	MN	Tiers		Ferries
	1995	MS	unregulated		Forklifts
	1996	MO	Tier 0		Graders
	1997	MT	Tier 1		Hydro Power Units
	1998	NE	Tier 2		Irrigation Sets
	1999	NV	Tier 3		Light Commercial Air Compressors
	2000	NH	Tier 4		Light Commercial Gas Compressors
	2001	NJ	Tier 0+		Light Commercial Generator Sets
	2002	NM	Tier 1+		Light Commercial Pressure Washer
	2003	NY	Tier 2+		Light Commercial Pumps
	2004	NC			Light Commercial Welders
	2005	ND			Locomotives Line-Haul
	2006	ОН			Locomotives Switch
	2007	OK			Locomotives Other
	2008	OR			Logging Equip Fell/Bunch/Skidders
	2009	PA			Logging Equipment Chain Saws > 6
	2010	RI			Logging Equipment Shredders > 6
	2011	SC			Off-Highway Tractors
	2012 2013	SD			Off-highway Trucks
	2013	TN TX			Other Agricultural Equipment
-	ZU 14	UT			Other Construction Equipment Other General Industrial Equipment
<b></b>		VT			Other Material Handling Equipment
-		VA			Pavers
-		WA			Paving Equipment
		WV			Plate Compactors
		WI			Railway Maintenance
		WY			Rollers
					Rough Terrain Forklifts
					Rubber Tire Dozers
					Rubber Tire Loaders
					Scrapers
					Signal Boards
				·	Skid Steer Loaders
					Sprayers
					Surfacing Equipment
					Swathers
					Sweepers/Scrubbers
					Tampers/Rammers (unused)
					Terminal Tractors
					Tillers > 6 HP
					Tractors/Loaders/Backhoes
					Trenchers



Applicant Fleet Description Spread	1	I	raye
			Diamirro
Tochnology	Marina Annliastica	Engine Turn	Displacement
Technology Diesel Oxidation Catalyst	Marine Application	Engine Type auxilliary	per Cylinder size < 0.9
Diesel Oxidation Catalyst + B20	Container Ferry/Excursion	propulsion	0.9 <= size < 1.2
Diesel Oxidation Catalyst + B100	Tug Boat/ Tow Boat	propulsion	1.2 <= size < 1.2
Diesel Oxidation Catalyst + Bloo  Diesel Oxidation Catalyst + Closed Crankcase Ventilation +B20	Commercial Fishing		2.5<= size <3.5
Dieser Oxidation Gataryst 1 Glosed Granicase Ventilation 1820	Commercial Charter		2.0 < = 3120 < 0.0
Diesel Oxidation Catalyst + Closed Crankcase Ventilation + B100	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 (f	or Nonroad only)		
Diesel Oxidation Catalyst + ULSD (for Nonroad only)			
Partial Flow Filter			
Lean NO <sub>x</sub> 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			
Direct Fired Heater			
Auxiliary Power Unit			
Shutdown/Startup for Locomotives			
Low Rolling Resistance Tires			
Aerodynamic Improvements			
Truck Stop Electrification			
Shore Connection System (Marine) Shore Connection System (Locomotive)			
Generator Set			
Battery Air Conditioning System			
Thermal Storage Systems			
Engine Shutdown			
Automatic Tire Inflation			
Other Fuel Efficient Tire			
Single Wide Tires			
Aero Profile Tractor			
Cab Side Fairing			
Cab Front air dam front bumper			
Cab roof fairing			
Trailer side skirts			
Trailer Bubble			
Trailer Tails			
Integrated cab roof fairing			
Cab roof deflector			
Other	1		
	1		
	1		