Seaport and Rail Yard Areas Emissions Reduction (SPRY) Program
Maximum Eligible Grant Amount Table Instructions
Fiscal Year (FY) 2022

1. Locate the Maximum Eligible Grant Amount table that applies to the type of vehicle/ equipment that you are applying to replace. All tables can be viewed or downloaded from the SPRY webpage at www.terpgrants.org.

2. Use the left-hand column of the table to locate the gross vehicle weight rating GVWR (on-road) or horsepower rating (non-road) of the old vehicle/equipment[1].

3. Once the GVWR or horsepower for the old vehicle/equipment has been located, use the ignition type column to determine the ignition type of the old vehicle/equipment (CI= Compression Ignition, SI=Spark Ignition). The ignition type will help you determine the emission rate that applies to the engine being replaced. [2]

   Emission Standard Tables are included at the end of these instructions to help determine the emission rate based on the year of the old vehicle/equipment.

4. Determine the fuel-type of the new vehicle/equipment that will replace the old vehicle/ equipment. This can be compression ignition (CI), spark ignition (SI) or electric.
5. Locate the usage commitment that you are applying for:
   - On-Road Projects: 50%, 75% or 100% usage commitment
   - Non-Road Projects: 75% or 100% usage commitment

   The usage commitment will be the percentage of the total miles/hours/ the new equipment will be operated in eligible areas each year for the 5-year activity life of the project.

6. Based on the GVWR or horsepower, ignition type, fuel type, and usage commitment, locate the maximum eligible grant amount for the activity.

7. Once the maximum eligible grant amount has been located, enter the amount on Form 5: Equipment Information of the TCEQ-20556 Application, under *Section 3: Requested Grant Amount*. The grant recipient may be eligible for reimbursement of up to 80% of the eligible costs associated with the purchase, lease, or repower of the equipment, not to exceed the maximum grant amount listed in the Maximum Eligible Grant Amount Tables found at www.terpgrants.org and not to exceed a cost per ton of $25,000 for the amount of NO_x reduced.

8. If you follow these instructions and the table amount for the vehicle/ equipment is not listed, then the maximum eligible grant amount for that activity either does not meet the 25% emission reduction requirement, or the amount is less than $5,000.00.

9. If you cannot find the engine/emission information in this document, or in the grant tables, please call TCEQ for assistance: 1-800-919-TERP.

ON-ROAD CERTIFIED EMISSION STANDARDS

Baseline NO_X Emission Rate

For these calculations, the baseline NOx emissions will normally be the federal NO_X emission standard for the model year and gross vehicle weight rating (GVWR) of the baseline vehicle and/or engine. The federal NO_X emission standards for on-road heavy duty diesel compression ignition (CI) vehicles are presented in Table 1.1. In situations where the model year of the vehicle and the model year of the engine are different, the model year of the engine should be used for determining the standard to apply. For some model years, the EPA began using a combined NO_X + NMHC (non-methane hydrocarbons)standard. For the standards listed in NO_X + NMHC, the TCEQ will use a NO_X fraction of 0.95 for diesel engines and 0.80 for alternative fuel engines to determine the NO_X-only emissions based on the combined standard.

TABLE 1.1 ON-ROAD HEAVY-DUTY COMPRESSION IGNITION (CI) ENGINES NO_X EMISSION STANDARDS BY MODEL YEAR

Year of Manufacture	Diesel Engines Emission Standard	
	NOx Only (g/bhp-hr)	NOx+NMHC (g/bhp-hr)
1989 and earlier	10.7	
1990	6.0	
1991-1997	5.0	
1998-2001	4.0	
2002	4.0	
2003*	4.0	
2004 -2006	2.375	2.5
2007-2009*	0.2-2.375	
2010+	0.2	

*Some manufacturers were producing 2003 engines that met the more stringent 2.375 g/bhp-hr standard. Any application request for consideration of a 2003 engine meeting the 2.375 g/bhp-hr standard must include a copy of the official engine certification for the specific engine model or family engine code.

*The 2007 NO_X emission standard is 0.20 g/bhp-hr. Manufacturers may phase in their compliance with this new standard over a three-year period. Therefore, it is not guaranteed that a 2007 model year vehicle and engine will meet the lower standard. If an applicant proposes to purchase a 2007 model year vehicle and/or engine, the applicant must certify, in the application, the emission level that the new vehicle and engine will meet. Copies of the form certifying the engine family to the lower emission standard must be provided before any grant expenses are reimbursed. If it is not yet known what emission standard to which the engine will be certified, then use the 2006 standard, 2.375 g/bhp-hr.

NON-ROAD CERTIFIED EMISSION STANDARDS

Baseline NO_x Emission Rate

For these calculations, the baseline NO_x emission rate will normally be the federal NO_x emission standard for the model year and horsepower of the baseline (old) engine. The federal NO_x emission standards for non-road equipment are presented in Table 1.2 below. In situations where the model year of the equipment and the model year of the engine are different, the model year of the engine should be used for determining the standard to apply.
In some model years, the EPA used a combined NO_x + NMHC (non-methane hydrocarbons) standard. For the standards listed in NO_x + NMHC, the TCEQ will use a NO_x fraction of 0.95 for diesel engines and 0.80 for alternative fuel engines to determine the NO_x-only emissions based on the combined standards.

TABLE 1.2 NON-ROAD DIESEL COMPRESSION IGNITION (CI) ENGINES NO_x EMISSION STANDARDS BY MODEL YEAR

Engine Power (hp)	Tier	Model Year	Emissions (NO_x) g/bhp-hr	Emissions (NO_x + NMHC) g/bhp-hr
Equal to or greater than 25hp (19 kW but less than 50hp (37kW)	Tier 0 (uncontrolled)	pre-1999	7.2	N/A
	Tier 1	1999-2003	6.745	7.1
	Tier 2	2004-2012	5.32	5.6
	Tier 4	2013+	3.325	3.5

	Tier	Model Year	Emissions (NO_x) g/bhp-hr	Emissions (NO_x + NMHC) g/bhp-hr
Equal to or greater than 50 hp (37 kW) but less than 75 hp (56 kW)	Tier 0 (uncontrolled)	pre-1998	8.8	N/A
	Tier 1	1998-2003	6.9	N/A
	Tier 2	2004-2007	5.32	5.6
	Tier 3	2008-2013	3.325	3.5
	Tier 4	2013+	3.325	3.5

	Tier	Model Year	Emissions (NO_x) g/bhp-hr	Emissions (NO_x + NMHC) g/bhp-hr
Equal to or greater than 75 hp (56 kW) but less than 100 hp (75 kW)	Tier 0 (uncontrolled)	pre-1998	8.8	N/A
	Tier 1	1998-2003	6.9	N/A
	Tier 2	2004-2007	5.32	5.6
	Tier 3	2008-2012	3.325	3.5
	Tier 4 (Phase-In)	2012-2013	0.30-3.325[1]	N/A
	Tier 4	2014+	0.30	N/A

	Tier	Model Year	Emissions (NO_X) g/bhp-hr	Emissions (NO_X + NMHC) g/bhp-hr
Equal to or greater than 100hp (75 kW) but less than 175 hp (130 kW)	Tier 0 (uncontrolled)	pre - 1997	9.5	N/A
	Tier 1	1997-2002	6.9	N/A
	Tier 2	2003-2006	4.655	4.9
	Tier 3	2007-2011	2.85	3.0
	Tier 4 (Phase-In)	2012-2013	0.30-2.85[1]	N/A
	Tier 4	2014+	0.30	N/A

	Tier	Model Year	Emissions (NO_X) g/bhp-hr	Emissions (NO_X + NMHC) g/bhp-hr
Equal to or greater than 175 hp (130 kW) but less than 300 hp (225 kW)	Tier 0 (uncontrolled)	pre-1996	9.3	N/A
	Tier 1	1996-2002	6.9	N/A
	Tier 2	2003-2005	4.655	4.9
	Tier 3	2006-2010	2.85	3.0
	Tier 4 (Phase-In)	2011-2013	0.30-2.85[1]	N/A
	Tier 4	2014+	0.30	N/A

	Tier	Model Year	Emissions (NO_X) g/bhp-hr	Emissions (NO_X + NMHC) g/bhp-hr
Equal to or greater than 300hp (225 kW) but less than 600 hp (450 kW)	Tier 0 (uncontrolled)	pre-1996	9.5	N/A
	Tier 1	1996-2000	6.9	N/A
	Tier 2	2001-2005	4.56	4.8
	Tier 3	2006-2010	2.85	3.0
	Tier 4 (Phase-In)	2011-2013	0.30-2.85[1]	N/A
	Tier 4	2014+	0.30	N/A

	Tier	Model Year	Emissions (NO_X) g/bhp-hr	Emissions (NO_X + NMHC) g/bhp-hr
Equal to or greater than 600 hp (450 kW) but less than 750 hp (560 kW)	Tier 0 (uncontrolled)	pre-1996	9.7	N/A
	Tier 1	1996-2001	6.9	N/A
	Tier 2	2002-2005	4.56	4.8
	Tier 3	2006-2010	2.85	3.0
	Tier 4 (Phase-In)	2011-2013	0.30-2.85[1]	N/A
	Tier 4	2014+	0.30	N/A

	Tier	Model Year	Emissions (NO_X) g/bhp-hr	Emissions (NO_X + NMHC) g/bhp-hr
Equal to or greater than 750 hp (560 kW)	Tier 0 (uncontrolled)	pre-2000	9.1	N/A
	Tier 1	2000-2005	6.9	N/A
	Tier 2	2006-2010	4.56	4.8
	Tier 4 (Phase-In)	2011-2014	2.6/0.50[2]	N/A
	Tier 4	2015+	2.6/0.50[3]	N/A

Note: For calculations use the NO_X g/bhp-hr column. NO_X + NMHC g/bhp-hr column is listed for reference only.

1. These standards are phased-in during the indicated years. At least 50% of a manufacturer's engine production mustmeet these standards during each year of the phase-in. Therefore, it is not guaranteed that a Tier 4 (Phase-In) equipment and/or engine will meet the lower standard. If an applicant proposes to purchase a Tier 4 (Phase-In) equipment and/or engine, the applicant must certify, in the application, the emission level that the new equipment and/or engine will meet. Copies of the form certifying the engine family to the lower emission standard must be provided. If it is not yet known what emission standard to which the engine will be certified, then use the Tier 3 standard.
2. The 0.50g/bhp-hr standard applies to gensets to over 1200 hp.
3. Applies to all gensets

TABLES 1.3 ON-ROAD AND NON-ROAD SPARK IGNITION (SI) ENGINES NO_x EMISSION STANDARDS BY MODEL YEAR

On-Road Heavy-Duty **SI[2] Engines** NO_x Emission Standards by Model Year [2]SI=Spark Ignition (e.g., Gasoline, CNG, LPG)	
Manufacturer Year	NO_x Emission Standard
1979-1987	10.0
1989-1991	4.8
1992-1997	4.0
1998-2004	3.2
2005-2008	1.0
2008+	0.20

Non-Road SI[2] Engines NO_x Emission Standards by Model Year [2]SI=Spark Ignition (e.g., Gasoline, CNG, LPG)	
Model Year	NO_x Emission Standard
2003 and earlier	11.99
2004-2007	2.39
2008+	0.48-1.61