

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary State of Texas

Lead Agency Authorized to Act on Behalf of the Beneficiary Texas Commission on Environmental Quality (TCEQ)
(Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

Action Title:	TxVEMP Projects to Replace or Repower Class 8 Local Freight & Port Drayage Trucks
Beneficiary's Project ID:	013040/00
Funding Request No.	<i>(sequential)</i>
Request Type: (select one or more)	<input checked="" type="checkbox"/> Reimbursement <input type="checkbox"/> Advance <input type="checkbox"/> Other (specify): _____
Payment to be made to: (select one or more)	<input type="checkbox"/> Beneficiary <input checked="" type="checkbox"/> Other (specify): <u>Vendors and Lead Agency</u>
Funding Request & Direction (Attachment A)	<input type="checkbox"/> Attached to this Certification <input checked="" type="checkbox"/> To be Provided Separately

SUMMARY

Eligible Mitigation Action	<input checked="" type="checkbox"/> Appendix D-2 item (specify): <u>Category 1: Class 8 Local Freight and Port Drayage Trucks</u>
Action Type	<input type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):
Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1): See Attachment	
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2): These actions will mitigate nitrogen oxides (NOx) emissions that can impact the formation of ground-level ozone in local and regional areas. See Attachment.	
Estimate of Anticipated NOx Reductions (5.2.3): The TCEQ estimates that projects funded under this action will mitigate approximately 347 tons of NOx over a four-year period.	
Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1): TCEQ	
Describe how the Beneficiary will make documentation publicly available (5.2.7.2). See Attachment	
Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8). See Attachment	
Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9). See Attachment	

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).
See Attachment

ATTACHMENTS
(CHECK BOX IF ATTACHED)

- Attachment A Funding Request and Direction.
- Attachment B Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).
- Attachment C Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).
- Attachment D Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding \$25,000.]
- Attachment E DERA Option (5.2.12). [Attach only if using DERA option.]
- Attachment F Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.]

CERTIFICATIONS

By submitting this application, the Lead Agency makes the following certifications:

1. This application is submitted on behalf of Beneficiary State of Texas, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.
2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.
3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.
4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)
5. Beneficiary will maintain and make publicly available all documentation submitted in

support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED:

12/4/19



Jon Niermann, Chairman

Texas Commission on Environmental Quality

LEAD AGENCY

for

State of Texas

BENEFICIARY

Supplementary Form to Appendix D-4

Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1).

The TCEQ requests \$16,757,936.50 in funds for the replacement or repower of Class 8 local freight and port drayage trucks with cleaner models. Projects funded under this request will mitigate the potential for exposure of the public to pollutants. (Page 3, Beneficiary Mitigation Plan for Texas)

Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2).

This category includes the replacement or repower of Class 8 local freight and port drayage trucks used for port drayage and/or freight/cargo delivery (e.g. waste haulers, dump trucks and concrete mixers). Eligible vehicles must also be powered by a diesel engine with a model year between 1992-2009, and have a Gross Vehicle Weight Rating (GVWR) greater than 33,001 lbs.

The emissions from local freight trucks that operate on regular routes result in more concentrated NO_x emissions that have the potential to add to the formation of ground-level ozone in the local and regional area. In addition, these vehicles operate on routes within the community, resulting in increased potential for exposure of the public to pollutants emitted by older engines.

Eligible grantees must be in the listed Priority Area and Counties:

Priority Area	Counties
Austin Area:	Bastrop, Caldwell, Hays, Travis, Williamson
Beaumont-Port Arthur Area:	Hardin, Jefferson, Orange
Bell County:	Bell
Dallas-Fort Worth Area:	Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise
El Paso County:	El Paso
Houston-Galveston-Brazoria Area:	Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller
San Antonio Area:	Bexar, Comal, Guadalupe, Wilson

Describe how the Beneficiary will make documentation publicly available (5.2.7.2).

Documents will be made publicly available through the:

- Texas Volkswagen Environmental Mitigation Program (TxVEMP) website www.TexasVWFund.org;
- TxVEMP email subscription list; and
- Texas Electronic State Business Daily website.

In addition, the Texas Commission on Environmental Quality (TCEQ) will be hosting application workshops and webinars to assist grantees with the application process.

Describe any cost share requirement to be placed on each NO_x source proposed to be mitigated (5.2.8).

Grants will be awarded on a first-come, first-served basis. An applicant may apply for and may be reimbursed for no more than the maximum percentage of cost limits or a predetermined table amount, whichever is less. See below for the maximum percentage of cost limits.

Government-Owned	
Replacement or Repower-Electric, Diesel, or Alternative Fuel	80%
Non-Government-Owned	
Replacement - Diesel or Alternative Fuel	25%
Repower - Diesel or Alternative Fuel	40%
Replacement or Repower - Electric	50%

Payments will be made on a reimbursement basis for eligible expenses incurred and paid by the grant recipient. A cost may not be considered incurred until the grant-funded goods and services have been received and accepted by the grant recipient. Grant recipients will be required to provide documentation to show that equipment or services have been received and the expenses have been incurred and paid by the grant recipient before reimbursement is provided by the TCEQ.

Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).

In accordance with Section 4.2.8 of the State Trust Agreement, the TCEQ provided notice via email to the U.S. Department of Interior and U.S. Department of Agriculture of the opportunity to request Volkswagen mitigation action funds. This notice included a copy of the State Trust Agreement and informed them of the opportunity to comment on Texas' draft Beneficiary Mitigation Plan.

If applicable, describe how the mitigation action will mitigate the impacts of NO_x emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).

The plan identifies seven Priority Areas that bear a disproportionate share of air pollution and particularly ozone within Texas:

- Dallas-Fort Worth Area
- Houston-Galveston-Brazoria Area
- San Antonio Area
- Austin Area
- El Paso County
- Bell County
- Beaumont-Port Arthur Area

These include the three areas of the state identified as nonattainment for the ground-level ozone National Ambient Quality Standards (NAAQS) and four other areas of the state that have monitored ground-level ozone concentrations close to the 2015 ground-level ozone NAAQS limit of 70 parts per billion.

Nonattainment Areas:

- Dallas-Fort Worth Area: Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise
- Houston-Galveston-Brazoria Area: Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller
- San Antonio Area: Bexar

Attainment Areas:

- Austin Area: Bastrop, Caldwell, Hays, Travis, and Williamson
- El Paso County
- Bell County
- Beaumont-Port Arthur Area: Hardin, Jefferson, and Orange
- San Antonio Area: Comal, Guadalupe, and Wilson

The Priority Areas contain many of the major metropolitan centers of the state as well as approximately 71% of the state population. Because of ground-level ozone formation in these areas, the TCEQ has determined that 81% of the total funding (approximately \$169.5 million) will be allocated exclusively to these areas to provide beneficial impacts on air quality.

The replacement or repower of vehicles that operate within communities located in these areas will help address the goals of the program, including reducing the potential exposure of residents in within these communities to pollutants emitted from older vehicles. To be considered operating in an area, a majority (51% or more) of the annual mileage or hours of operation of the grant-funded vehicle or equipment must occur in the designated counties.

Attachment B to D-4: Eligible Mitigation Action Management Plan and Budget

I. Project Management Plan: Project Schedule and Milestones

Milestones	Date ¹
Application period for the replacement or repower of Class 4-7 Local Freight Trucks and Class 8 Local Freight and Port Drayage Trucks	Jan. 2020 - Jan. 2021
Conduct application workshops in Priority Areas of Texas	Dec. 2019
Review and select project applications on a first-come, first served basis	Jan. 2020- Jan. 2021
Draft and execute contracts with entities selected for award	Jan. 2020- Jan. 2021
Process certification of disposition for equipment being replaced submitted by Awardee	April 2020- June 2022
Process requests for reimbursement for the new equipment submitted by Awardee	April 2020- June 2022
TCEQ certifies payment direction to Trustee monthly through the submission of an Attachment A.	April 2020- June 2022
TCEQ will submit semi-annual reports to the trustee describing the process of implementing each eligible mitigation action included in the funding requests. These reports will include the status of each project and updates on payments to grantees and agency administrative costs.	Jan. 2020-Aug. 2022
Upon confirmation of payment, Awardee begins commitment to operate the new equipment in the Priority Areas at least 51% of the equipment's total annual miles of operation.	Jan. 2020- Aug. 2027

¹Dates are approximate and may vary depending on the volume of applications received and awarded.

II. Project Budget

Budget Category	Total Requested Budget
Project Expenditures	\$16,757,936.50
Administrative Expenditures	\$670,317.46
Total	\$17,428,253.96

III. Project Cost Share

Awardee Type	Project Type	% of Awardee Cost Share ¹
Government	Replacements and Repowers	≥ 20%
Non-Government	Replacement-Electric	≥ 50%
Non-Government	Replacement-Diesel or Alt. Fuel	≥ 75%
Non-Government	Repower-Electric	≥ 50%
Non-Government	Repower-Diesel or Alt. Fuel	≥ 40%

¹The percentage of the cost share to be paid by the awardee is applied to each repower or replacement activity included in a contract.

Attachment C to Appendix D-4: Detailed Plan for Reporting on Eligible Mitigation Action Implementation

1. **Purpose:** The Texas Volkswagen Environmental Mitigation Program (TxVEMP) is preparing to open the third round of funding for projects to replace or repower Class 4-7 local freight trucks and Class 8 local freight and port drayage trucks used to deliver cargo and freight. Class 4-7 local freight trucks and Class 8 local freight and port drayage trucks fall under two separate eligible mitigation action categories. The Texas Commission on Environmental Quality (TCEQ) plans to submit a D-4 for each category. However, both categories will be solicited under one Request for Grant Applications. Electric and hydrogen infrastructure may also be included in a project application for charging or refueling all-electric or hydrogen-fuel cell replacement and repower vehicles included in the project

This attachment is in reference to Class 8 local freight trucks and port drayage trucks.

2. Program Criteria

- a. **Eligible Applicants:** Eligible applicants under the TxVEMP must operate Class 8 local freight trucks and port drayage trucks at least 51% of the vehicle's annual mileage in one of the Priority Areas.
- b. **Vehicles being replaced or repowered must:**
 - have a gross vehicle weight rating greater than or equal to 33,001 lbs;
 - be powered by a diesel engine of model year 1992- 2009;
 - be used for port drayage and/ or freight/ cargo delivery;
 - be considered capable of performing its primary function for the next five years;
 - been continuously inspected and registered in Texas for the two years immediately preceding the application signature date;
 - been used routinely by the applicant in Texas for the two years immediately preceding the application signature date; and
 - been owned by the applicant for the two years immediately preceding the application signature date.
- c. **New vehicles must:**
 - be powered by electricity, diesel, or an alternative fuel (e.g., CNG, propane, hybrid);
 - have an engine model year not more than one year older than the year the application is submitted;
 - be certified by the EPA or CARB to a NO_x emissions standard or family emissions limit (FEL) of 0.2 g/bhp-hr or lower; and
 - be of the same type, weight category, and body and axle configuration as the vehicle being replaced.
- d. **Activity life and usage commitment:** The applicant must commit to use the grant-funded vehicle at least 51% of the vehicle's annual miles of operation in one of the Priority Areas for the duration of the five-year activity life. Annual reports on the use of the grant-funded vehicles and equipment will not be required. However, the grant recipient must agree to provide information on the use of the vehicles and equipment upon request by the TCEQ.
- e. **Eligible grant amounts will be the lesser amount of:**
 - (i) the predetermined grant amount set by the TCEQ for that type of activity; or
 - (ii) the maximum percentage of eligible costs for the actual, eligible expenditures.

3. Application Review and Selection: Eligible projects will be processed for approval on a first-come, first-served basis. Applicants may apply for the replacement or repower of up to 20 vehicles per Priority Area, either in one application or multiple applications, every three months.

4. Outreach

- a. **Program Documents:** Program documents will be available on the TxVEMP website once the round has officially opened to the public. Documents have been drafted in accordance with accessibility standards and are available in a fillable PDF format.
- b. **Program Notifications:** Notifications will be provided on the status of grant rounds through the TxVEMP email list serve and official agency press releases.
- c. **Application workshops:** TxVEMP staff will conduct application workshops in each of the Priority Areas. Webinars will also be provided for interested parties who are unable to attend a live workshop.
- d. **Funds availability status:** TxVEMP staff will regularly update a report provided on the TxVEMP website to update interested parties on the availability of funding under the first round.
- e. **Project Summaries:** TxVEMP staff will provide a monthly project summary report on the TxVEMP website. The report will include project descriptions, awarded grant amounts, and project emissions reductions.

Attachment D to D-4: Detailed cost estimates from selection or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6).

Attached tables show the amount a grantee could be eligible to receive for each vehicle type.

Class 8 Trucks (GVWR: Greater than 33,001 pounds)

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$105,408	\$60,330	\$49,936	\$36,063	\$22,189	\$8,315
	CI	0.02	\$105,408	\$62,386	\$52,439	\$39,190	\$25,965	\$12,717
	SI	0.2	\$147,130	\$84,209	\$69,702	\$50,336	\$30,971	\$11,606
	SI	0.02	\$147,130	\$87,079	\$73,194	\$54,702	\$36,243	\$17,751

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$32,940	\$18,853	\$15,605	\$11,270	\$6,934	\$2,598
	CI	0.02	\$32,940	\$19,496	\$16,387	\$12,247	\$8,114	\$3,974
	SI	0.2	\$45,978	\$26,315	\$21,782	\$15,730	\$9,678	\$3,627
	SI	0.02	\$45,978	\$27,212	\$22,873	\$17,095	\$11,326	\$5,547

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Class 8 Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$52,704	\$30,165	\$24,968	\$18,031	\$11,094	\$4,157
	CI	0.02	\$52,704	\$31,193	\$26,219	\$19,595	\$12,983	\$6,359
	SI	0.2	\$73,565	\$42,104	\$34,851	\$25,168	\$15,486	\$5,803
	SI	0.02	\$73,565	\$43,540	\$36,597	\$27,351	\$18,121	\$8,875

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Dump Trucks

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$126,294	\$72,284	\$59,831	\$43,208	\$26,585	\$9,962
	CI	0.02	\$126,294	\$74,747	\$62,829	\$46,956	\$31,110	\$15,237
	SI	0.2	\$195,755	\$112,040	\$92,738	\$66,972	\$41,207	\$15,441
	SI	0.02	\$195,755	\$115,859	\$97,385	\$72,781	\$48,221	\$23,617

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$39,467	\$22,589	\$18,697	\$13,502	\$8,308	\$3,113
	CI	0.02	\$39,467	\$23,359	\$19,634	\$14,674	\$9,722	\$4,762
	SI	0.2	\$61,174	\$35,012	\$28,981	\$20,929	\$12,877	\$4,825
	SI	0.02	\$61,174	\$36,206	\$30,433	\$22,744	\$15,069	\$7,380

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Dump Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$63,147	\$36,142	\$29,915	\$21,604	\$13,293	\$4,981
	CI	0.02	\$63,147	\$37,374	\$31,414	\$23,478	\$15,555	\$7,619
	SI	0.2	\$97,878	\$56,020	\$46,369	\$33,486	\$20,603	\$7,721
	SI	0.02	\$97,878	\$57,929	\$48,692	\$36,391	\$24,110	\$11,809

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Garbage Trucks

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$185,061	\$105,919	\$87,672	\$63,314	\$38,956	\$14,598
	CI	0.02	\$185,061	\$109,529	\$92,064	\$68,805	\$45,586	\$22,327
	SI	0.2	\$277,694	\$158,937	\$131,556	\$95,006	\$58,455	\$21,905
	SI	0.02	\$277,694	\$164,355	\$138,148	\$103,246	\$68,405	\$33,503

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$57,832	\$33,100	\$27,397	\$19,786	\$12,174	\$4,562
	CI	0.02	\$57,832	\$34,228	\$28,770	\$21,502	\$14,246	\$6,977
	SI	0.2	\$86,780	\$49,668	\$41,111	\$29,689	\$18,267	\$6,845
	SI	0.02	\$86,780	\$51,361	\$43,171	\$32,264	\$21,377	\$10,470

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Garbage Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$92,530	\$52,959	\$43,836	\$31,657	\$19,478	\$7,299
	CI	0.02	\$92,530	\$54,765	\$46,032	\$34,403	\$22,793	\$11,164
	SI	0.2	\$138,847	\$79,469	\$65,778	\$47,503	\$29,228	\$10,952
	SI	0.02	\$138,847	\$82,177	\$69,074	\$51,623	\$34,203	\$16,752

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Roll-Off Trucks

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$143,695	\$82,243	\$68,075	\$49,161	\$30,248	\$11,335
	CI	0.02	\$143,695	\$85,047	\$71,486	\$53,426	\$35,397	\$17,337
	SI	0.2	\$222,856	\$127,551	\$105,577	\$76,244	\$46,912	\$17,579
	SI	0.02	\$222,856	\$131,898	\$110,867	\$82,857	\$54,897	\$26,887

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$44,905	\$25,701	\$21,273	\$15,363	\$9,453	\$3,542
	CI	0.02	\$44,905	\$26,577	\$22,339	\$16,695	\$11,061	\$5,418
	SI	0.2	\$69,643	\$39,860	\$32,993	\$23,826	\$14,660	\$5,493
	SI	0.02	\$69,643	\$41,218	\$34,646	\$25,893	\$17,155	\$8,402

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Roll-Off Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$71,848	\$41,122	\$34,037	\$24,581	\$15,124	\$5,667
	CI	0.02	\$71,848	\$42,523	\$35,743	\$26,713	\$17,698	\$8,668
	SI	0.2	\$111,428	\$63,775	\$52,788	\$38,122	\$23,456	\$8,790
	SI	0.02	\$111,428	\$65,949	\$55,433	\$41,429	\$27,448	\$13,444

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Tank Trucks

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$126,329	\$72,304	\$59,848	\$43,220	\$26,592	\$9,965
	CI	0.02	\$126,329	\$74,768	\$62,846	\$46,969	\$31,119	\$15,241
	SI	0.2	\$151,929	\$86,956	\$71,975	\$51,978	\$31,981	\$11,984
	SI	0.02	\$151,929	\$89,920	\$75,582	\$56,487	\$37,425	\$18,330

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$39,478	\$22,595	\$18,702	\$13,506	\$8,310	\$3,114
	CI	0.02	\$39,478	\$23,365	\$19,639	\$14,678	\$9,725	\$4,763
	SI	0.2	\$47,478	\$27,174	\$22,492	\$16,243	\$9,994	\$3,745
	SI	0.02	\$47,478	\$28,100	\$23,619	\$17,652	\$11,695	\$5,728

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Tank Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$63,164	\$36,152	\$29,924	\$21,610	\$13,296	\$4,982
	CI	0.02	\$63,164	\$37,384	\$31,423	\$23,484	\$15,559	\$7,621
	SI	0.2	\$75,964	\$43,478	\$35,988	\$25,989	\$15,991	\$5,992
	SI	0.02	\$75,964	\$44,960	\$37,791	\$28,243	\$18,712	\$9,165

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Vacuum Trucks

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$125,490	\$71,823	\$59,450	\$42,933	\$26,416	\$9,899
	CI	0.02	\$125,490	\$74,272	\$62,429	\$46,657	\$30,912	\$15,140
	SI	0.2	\$151,090	\$86,475	\$71,578	\$51,691	\$31,805	\$11,918
	SI	0.02	\$151,090	\$89,423	\$75,164	\$56,175	\$37,218	\$18,229

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$39,216	\$22,445	\$18,578	\$13,417	\$8,255	\$3,093
	CI	0.02	\$39,216	\$23,210	\$19,509	\$14,580	\$9,660	\$4,731
	SI	0.2	\$47,216	\$27,024	\$22,368	\$16,154	\$9,939	\$3,724
	SI	0.02	\$47,216	\$27,945	\$23,489	\$17,555	\$11,631	\$5,696

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Vacuum Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$62,745	\$35,912	\$29,725	\$21,466	\$13,208	\$4,949
	CI	0.02	\$62,745	\$37,136	\$31,214	\$23,328	\$15,456	\$7,570
	SI	0.2	\$75,545	\$43,238	\$35,789	\$25,846	\$15,902	\$5,959
	SI	0.02	\$75,545	\$44,712	\$37,582	\$28,087	\$18,609	\$9,114

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Water Trucks

Government Replacement or Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$115,724	\$66,234	\$54,824	\$39,592	\$24,360	\$9,128
	CI	0.02	\$115,724	\$68,492	\$57,571	\$43,026	\$28,507	\$13,962
	SI	0.2	\$141,324	\$80,886	\$66,951	\$48,350	\$29,749	\$11,148
	SI	0.02	\$141,324	\$83,643	\$70,306	\$52,544	\$34,813	\$17,050

Non-Government Replacement Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$36,164	\$20,698	\$17,132	\$12,372	\$7,613	\$2,853
	CI	0.02	\$36,164	\$21,404	\$17,991	\$13,446	\$8,908	\$4,363
	SI	0.2	\$44,164	\$25,277	\$20,922	\$15,109	\$9,297	\$3,484
	SI	0.02	\$44,164	\$26,139	\$21,971	\$16,420	\$10,879	\$5,328

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.

Water Trucks

Non-Government Repower Projects

			Model Year and Emission Standard of Old Vehicle ³					
Old Ignition Type ¹	New Ignition Type ¹	New Emission Rate ² (g/bhp-hr)	<2002-2003	2004-2007	2007-2009 2.0 (g/bhp-hr)	2007-2009 1.5 (g/bhp-hr)	2007-2009 1.0 (g/bhp-hr)	2007-2009 0.5 (g/bhp-hr)
CI	CI	0.2	\$57,862	\$33,117	\$27,412	\$19,796	\$12,180	\$4,564
	CI	0.02	\$57,862	\$34,246	\$28,785	\$21,513	\$14,253	\$6,981
	SI	0.2	\$70,662	\$40,443	\$33,476	\$24,175	\$14,875	\$5,574
	SI	0.02	\$70,662	\$41,822	\$35,153	\$26,272	\$17,406	\$8,525

¹Ignition Types are as follows: CI = Compression-Ignition (e.g., Diesel), SI = Spark-Ignition (e.g., LPG, CNG), Zero = Zero emission vehicle (e.g., electric).

²The 0.2 g/bhp-hr NO_x emission rate is the current EPA federal standard for new on-road heavy-duty vehicles. The 0.02 g/bhp-hr NO_x emission rate is an optional California low-NO_x standard.

³The 2010 EPA NO_x emission rate standard for heavy-duty, compression ignition, on-road vehicles was phased-in from 2007 thru 2010. Engines produced during these years may have a range of NO_x emission rates. If the EPA certified emission rate for an engine manufactured between 2007 and 2009 falls between one of the NO_x emission rate values listed on the table, round up to the nearest listed value for the purposes of determining an eligible grant amount.