

**STATE OF TENNESSEE
VOLKSWAGEN DIESEL SETTLEMENT
ENVIRONMENTAL MITIGATION TRUST
MEDIUM- AND HEAVY-DUTY VEHICLE GRANT
PROGRAM APPLICATION MANUAL**



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VW SETTLEMENT OVERVIEW:

In 2015, Volkswagen (VW) publicly admitted that it had secretly and deliberately installed a defeat device—software designed to cheat emissions tests and deceive federal and state regulators—in approximately 590,000 model year 2009 to 2016 motor vehicles containing 2.0 and 3.0 liter diesel engines. The United States Department of Justice (DOJ) filed a complaint against VW, alleging that the company had violated the Clean Air Act. In October 2016 and May 2017, the U.S. District Court, Northern District of California (“Court”), approved two partial settlements related to the affected 2.0 and 3.0 liter vehicles, respectively, totaling \$14.9 billion (“the VW Settlement”). The VW Settlement will be implemented through the First Partial Consent Decree and Second Partial Consent Decree.

Under these consent decrees, VW has agreed to establish a \$2.9 Billion Environmental Mitigation Trust (EMT) to mitigate the environmental effects of the excess nitrogen oxide (NOx) emissions from the affected vehicles. In March 2017, the Court appointed Wilmington Trust, N.A. as Trustee of the EMT, and in October 2017, the Court approved two Trust Agreements for Beneficiaries: one for the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico (“State Trust Agreement”), and one for the separate allocation for federally recognized Indian tribes in the U.S. The State of Tennessee (“the State”) officially became a Beneficiary of the EMT on January 29, 2018, allowing the State to fund Eligible Mitigation Actions (EMAs), as defined in the First Partial Consent Decree and State Trust Agreement, that comply with the State’s Beneficiary Mitigation Plan (BMP). The State’s initial allocation under the EMT is \$45,759,914.40.

For more information on the VW Settlement, the EMT, and the State of Tennessee’s final BMP, which was last modified on July 19, 2022, please visit <https://www.tn.gov/environment/VWSettlement>.

Note: All terms that are both bolded and italicized in this Application Manual are defined in Appendix D-2 of the State Trust Agreement.¹

STATE OF TENNESSEE VW SETTLEMENT EMT MEDIUM- AND HEAVY-DUTY VEHICLE REPLACEMENT GRANT PROGRAM:

The State of Tennessee VW Settlement EMT Medium- and Heavy-Duty Vehicle Replacement Grant Program (“Program”) are managed by the Tennessee Department of Environment and Conservation (TDEC) Office of Energy Program (OEP). Under this solicitation, \$19,481,396.11 in EMT funding is available for eligible Medium- and Heavy-Duty ***Alternate Fueled*** and/or ***All-Electric*** replacement vehicle projects. Eligible applicants are limited to one application each. Medium- and Heavy-Duty vehicles eligible for replacement or ***Repower*** include ***Class 4-7 Local Freight Trucks*** (Medium Truck), ***Class 8 Local Freight Trucks and Port Drayage Trucks*** (Large Truck), ***Class 4-8 Transit and Shuttle, and Class 4-8 School Buses***. Entities may apply for funds in more than one of the four eligible EMA vehicle categories and/or fuel types (*diesel-fueled vehicles not included*). The terms and conditions of the program are outlined in this Application Manual. For purposes of administering these Program according to the procedures established by the VW Settlement EMT State Trust Agreement, TDEC will

¹ State Trust Agreement, https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020.pdf.

prompt applicants to clearly distinguish their projected costs, emissions reduction benefits, and other required documentation by EMA category (Medium Truck, Large Truck, Transit Bus & Shuttle Bus, and School Bus) within the online application.

Eligible Medium- and Heavy-Duty Vehicle(s) may be replaced with an **Alternate Fueled** or **All-Electric** vehicle(s) (*replacement with new diesel vehicles will not be eligible under this solicitation*). **Repowers** of Medium- and Heavy-Duty Vehicles with any new **Alternate Fueled** or **All-Electric** engine shall also be considered eligible.

For **All-Electric** Medium- and Heavy-Duty Vehicle projects, TDEC will provide funding to support a maximum of 15 Medium- and Heavy-Duty Vehicle replacements or **Repowers** per applicant. "**All-Electric**" shall mean powered exclusively by electricity provided by a battery, fuel cell, or the grid.² Additionally, requests for funding of **All-Electric** Medium- and Heavy-Duty Vehicle projects, including associated **All-Electric** infrastructure costs, may not exceed \$3,000,000 per applicant.

For **Alternate Fueled** Medium- and Heavy-Duty Vehicle projects, TDEC will provide funding to support a maximum of 15 Medium- and Heavy-Duty Vehicle replacements or **Repowers** per applicant. "**Alternate Fueled**" shall mean an engine, or a vehicle or piece of equipment that is powered by an engine, which uses a fuel different from or in addition to gasoline fuel or diesel fuel (e.g., CNG, propane).³

Additionally, requests for funding of **Alternate Fueled** Medium- and Heavy-Duty Vehicle projects may not exceed \$1,500,000 per applicant. Funding requests comprised of both **All-Electric** and **Alternate Fueled** Medium- and Heavy-Duty Vehicle projects, including associated **All-Electric** infrastructure costs, may not exceed \$3,000,000 per applicant.

Eligible applicants are limited to one application each. Applications may include a variety of vehicle and/or fuel types. The terms and conditions of the Program are outlined in this Application Manual.

DEADLINE TO SUBMIT:

Applications and supporting documentation must be submitted electronically via the TDEC Online Grants Management System, which may be accessed here: <https://tdec.smartsimple.com/s/Login.jsp> Applications must be received by 4:00 PM CST on Friday, June 13. Awards are expected to be announced in the Quarter 3 of 2025, and the expected timeframe for grant contracting efforts will be in Quarter 4 of 2025.

ELIGIBILITY AND KEY CONSIDERATIONS:

Eligible Applicants:

- Eligible applicants include both **Government** and Non-Government entities. "**Government**" shall mean a State or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority, owning fleets

purchased with government funds), and a tribal government or native village.²

- With regard to federal agencies, the State will classify the Department of Interior, the U.S. Department of Agriculture, and other eligible federal agencies as **Government** entities with regard to proposal(s) for projects limited to or located in federal Clean Air Act Class I and II areas³ and as Non-Government entities with regard to all other proposals.
- **Government** entities must be located (e.g., a municipal or county government) and/or have a physical presence in Tennessee (e.g., certain federal agencies). Non-Government entities must have a physical presence and operate within Tennessee.
- Applicants must intend to maintain operations in Tennessee for a minimum of five years.

Eligible Projects:

- Medium- and Heavy-Duty Vehicles eligible for replacement or **Repower** include 1992–2009 engine model year or older **Class 4-7 Local Freight Trucks (Gross Vehicle Weight Rating [GVWR] between 14,001 lbs. and 33,000 lbs.)** used to deliver **Cargo and Freight, Class 8 Local Freight Trucks and Port Drayage Trucks (GVWR greater than 33,000 lbs.)** used for port drayage and/or freight/cargo delivery and **Class 4-8 Transit, Shuttle, and School Buses (GVWR greater than 14,001 lbs.)** used for transporting people. For purposes of this solicitation, “Transit Buses” shall include all vehicles that provide public transportation, which shall mean regular and continuing shared-ride surface transportation services that are open to the general public. “Shuttle Buses” shall include vehicles that provide transportation services for one or more specific entities, intra-terminal or intra-facility transportation services, or mobility-on-demand services. “**Drayage Trucks**” shall mean trucks hauling cargo to and from ports and intermodal rail yards.
- TDEC has developed the following additional definitions for purposes of administering the Medium and Large Truck Grant Program:
 - “**Cargo and Freight**” shall mean goods transported in bulk; raw materials, feedstocks, and other commodities; heating and transportation fuels; construction materials; residential, commercial, and industrial waste; residential, commercial, and industrial goods transported via established moving services; mail and other packages; equipment that enables emergency response and other public services; and any other items that must be transported via truck to support commerce and safety.
 - “**Local**” shall refer to vehicles that operate in Tennessee counties for 70% or more of the time.
 - “**Port**” shall refer to facilities along navigable water for the loading and unloading of cargo from ships; places from which aircraft operate that have paved runways and passenger and cargo terminals which include baggage-movement and passenger-transit operations; or nodes in the larger goods movement supply chain, to include cruise terminals, bulk terminals, container terminals, and intermodal container transfer facilities.
- Eligible Medium- and Heavy-Duty Vehicles may be **Repowered** with any new **All-Electric** and/or **Alternate Fueled** engine or may be replaced with any **All-Electric** or **Alternate Fueled** vehicle with the engine model year in which the **Repower** or replacement occurs or one engine model year prior.
 - “**Repower**” shall mean to replace an existing engine with a newer, cleaner engine or

² Ibid.

³ See 42 U.S.C. §7472 and §7407 for definitions of Clean Air Act Class I and Class II areas.

power source that is certified by EPA and, if applicable, CARB, to meet a more stringent set of engine emission standards. **Repower** includes but is not limited to, diesel engine replacement with an engine certified for use with a clean alternate fuel. **All-Electric** and fuel cell **Repowers** do not require EPA or CARB certification.⁴

- Bi-fuel engines and vehicles will be considered on a case-by-case basis for Emergency Response Vehicles only.
 - **"Bi-fuel"** shall mean an engine or motor vehicle that is capable of operating on gasoline or diesel fuel in addition to another type of fuel, such as natural gas or propane. Both fuels are stored on board and the driver can switch between the fuels. The vehicle is equipped with fuel tanks, fuel injection systems, and fuel lines for both fuels.⁵ All bi-fuel vehicles will be required to utilize the alternative fuel for no less than 70% of the vehicle's fuel use for a period of no less than five years.
 - **"Emergency Response Vehicle"** shall mean any vehicle that is designated and authorized to respond to an emergency situation that threatens or negatively impacts public health, safety, and welfare. These vehicles are usually operated by designated government agencies or first responders (including fire, police, and emergency medical personnel), but may also be operated by charities, non-governmental organizations, and some commercial companies. Examples of emergency response vehicles include police cars, firetrucks, ambulances, and other similar on-road vehicles necessary for transporting first responders, other emergency services personnel, patients, and equipment in times of emergency.⁶
- Eligible Medium- and Heavy-Duty Vehicle replacements and/or **Repowers** must be purchased new, from an original equipment manufacturer (OEM) or OEM-authorized dealer. For all vehicle replacement projects, if the new Medium- and Heavy-Duty Vehicles shall be **Alternate Fueled** or **All-Electric**, it shall be fully equipped by the manufacturer or by a third party at the direction of the manufacturer to operate on an alternative fuel or electricity prior to the initial purchase and registration of the vehicle.
- TDEC will allow the replacement or **Repower** of eligible Medium- and Heavy-Duty Vehicles that are leased out, so long as the entity applying to receive funds (1) takes full title to and ownership of the vehicles, and (2) the new vehicles will be leased to Tennessee-based operators who will use the vehicles for the duration of the grant's five-year annual reporting period, to begin following vehicle procurement, delivery, and the placement of vehicles into service. In the event that a vehicle lease contract between the applicant and a Medium- and Heavy-Duty Vehicle operator is not renewed within the grant's five-year reporting period, the owner must place the replacement or **Repowered** Medium- and Heavy-Duty Vehicles within another Medium- and Heavy-Duty Vehicle fleet in Tennessee and continue to report on related metrics (e.g., actual fuel usage, mileage of the grant-funded vehicles, etc.) for the remainder of the five-year reporting period. In the event the owner is unable to continue to operate the Medium- and Heavy-Duty Vehicles within a Tennessee fleet, that owner shall reimburse the State for the pro rata amount of the residual value, based on the State's original contribution to the purchase price.

⁴ State Trust Agreement, App'x D-2, https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020.pdf.

⁵ Appendix 4, State of Tennessee's Beneficiary Mitigation Plan, https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/TDEC%20VW%20EMT%20BMP_Updated%205.22.19.pdf.

⁶ Ibid.

- All eligible Medium- and Heavy-Duty Vehicles to be replaced must be **Scrapped** within ninety (90) days of new vehicle delivery. Engines from eligible Medium- and Heavy-Duty Vehicles to be **Repowered** must be **Scrapped** within ninety (90) days of vehicle **Repower** (if the applicant will perform the **Repower**) or within ninety (90) days of **Repowered** vehicle delivery (if an external, third-party will perform the **Repower**). **“Scrapped”** shall mean to render inoperable and available for recycling, and, at a minimum, to specifically cut a 3-inch hole in the engine block for all engines. If any eligible Medium- and Heavy-Duty Vehicles will be replaced as part of an eligible project, **Scrapped** shall also include the disabling of the chassis by cutting the vehicle’s frame rails completely in half.⁷
 - Grantees selected for funding under the Medium- and Heavy-Duty Vehicle Program will also be required to secure a Non-Repairable Certificate for each replaced vehicle, which prevents the vehicle from being titled or registered in the State of Tennessee following scrappage. To obtain a Non-Repairable Certificate, a vehicle owner can mail [a completed application](#) to the Tennessee Department of Revenue, Special Investigations, Anti-theft Unit. There is no cost to obtain a Non-Repairable Certificate.
- Eligible Medium- and Heavy-Duty Vehicles must be certified/approved by the U.S. Environmental Protection Agency (EPA) and/or the California Air Resources Board (CARB) and must comply with all federal and state safety requirements.
- Eligible Medium- and Heavy-Duty Vehicles must be registered within the State of Tennessee or registered within the International Registration Plan (IRP).

The following projects are not eligible for the State of Tennessee VW EMT Medium- and Heavy-Duty Vehicle Grant Program funding:

- Replacement or **Repower** of vehicles with a new diesel vehicle or engine;
- Replacement or **Repower** of vehicles that are no longer operable;
- Replacement or **Repower** of eligible Medium- and Heavy-Duty Vehicles with vehicles/engines or power sources that are not commercially available;
- **All-Electric** infrastructure technologies that are not commercially available;
- Replacement of eligible Medium- and Heavy-Duty Vehicles with a rebuilt vehicle and/or a vehicle containing a rebuilt or remanufactured engine or power source; and
- **Repower** of eligible Medium- and Heavy-Duty Vehicles with a rebuilt or remanufactured engine or power source.

Eligible Costs:

- Up to 25% of the cost of a **Repower** or replacement for Non-Government Owned **Alternate Fueled** projects;
- Up to 50% of the cost of a **Repower** or replacement for **Government** Owned **Alternate Fueled** projects;
- Up to 75% of the cost of a **Repower** or replacement for **Government** Owned **Alternate Fueled** projects that will operate 70% or more of the time in current or former nonattainment areas for Ozone and/or PM2.5 National Ambient Air Quality Standards (NAAQS);⁸

⁸ State Trust Agreement, App’x D-2, https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020.pdf.

⁸ For purposes of this Program, an area must be currently or formerly in nonattainment for Ozone and/or PM2.5 NAAQS as of the date of the solicitation release (August 31, 2024) to be treated as a current or former nonattainment area during the application evaluation process. A comprehensive list of nonattainment/maintenance status for Tennessee counties by year may be accessed here:

https://www3.epa.gov/airquality/greenbook/anayo_tn.html.

- Up to 75% of the cost of a **Repower** or replacement for **Government** Owned **Alternate Fueled** projects that will operate 70% or more of the time in Distressed Counties;⁹
- Up to 50% of the cost of a **Repower** or replacement for Non-Government Owned **All-Electric** projects;
- Up to 75% of the cost of a **Repower** or replacement for **Government** Owned **All-Electric** projects;
- Up to 90% of the cost of a **Repower** or replacement for **Government** Owned **All-Electric** projects that will operate 70% or more of the time in current or former nonattainment areas for Ozone and/or PM2.5 National Ambient Air Quality Standards (NAAQS);
- Up to 90% of the cost of a **Repower** or replacement for **Government** Owned **All-Electric** projects that will operate 70% or more of the time in Distressed Counties;
- For **All-Electric** projects, up to 50% of the acquisition and installation costs for associated charging infrastructure (**All-Electric** infrastructure costs) for Non-Government Owned projects, up to 75% of the **All-Electric** infrastructure costs for **Government** Owned projects, and up to 90% of the **All-Electric** infrastructure costs for **Government** Owned, **All-Electric** projects located in Distressed County or current or former Non-Attainment Areas.

Eligible costs under this Program are limited to (1) the purchase costs of eligible Medium- and Heavy-Duty Vehicles, (2) the cost of a **Repower** with a new **Alternate Fueled** or **All-Electric** engine, including the cost of installation of such engine, and (3) the acquisition and installation costs for associated **All-Electric** infrastructure, if applicable.

- The total purchase cost of eligible Medium- and Heavy-Duty Vehicles may include required costs to acquire the vehicle(s), such as taxes and delivery fees.
- Non-engine equipment costs associated with the **Repower** of a vehicle to a certain **Alternate Fueled** or **All-Electric** technology (e.g., the cost of battery packs) shall be considered eligible for reimbursement.
- Costs not integral to Medium- and Heavy-Duty Vehicle function cannot be considered eligible for reimbursement. Cost estimates provided as supporting documentation along with the application must detail any such costs in an itemized fashion.
- Grant funding shall not cover costs associated with the scrappage of eligible Medium- and Heavy-Duty Vehicles and/or engines. If a Grantee receives money in return for scrapping a vehicle or engine, they may apply said funds toward the required cost share.

Grant Project/Reimbursement Timeline:

- The Grantee will have 24 months from the effective date of the Grant Contract to complete the project.
- Payment of project expenses will take place on a reimbursement basis. The Grantee must purchase or **Repower** the vehicle(s), purchase and install associated **All-Electric** infrastructure (if applicable), and submit required invoice documentation before payment can occur. TDEC

⁹ Distressed Counties are defined as those counties that rank amongst the 10% most economically distressed counties in the nation based on a three-year average unemployment rate, per capita market income, and poverty rate. Distressed County designations are updated each State Fiscal Year. For purposes of this Program, a county must be designated as Distressed in Fiscal Year 2023 in order to be treated as a Distressed County during the application evaluation process. As of Fiscal Year 2023, Tennessee has 8 Distressed Counties. A comprehensive list of Distressed Counties for Fiscal Year 2023 may be accessed here: <https://www.tn.gov/transparenttn/state-financial-overview/open-ecd/openecd/tneecd-performance-metrics/openecd-long-term-objectives-quick-stats/distressed-counties.html>

- will not reimburse expenses that are incurred prior to the start date of the Grant Contract.
- The Grantee may proceed with its project after it is notified by State that its Grant Contract has been fully executed and approved.

Additional Considerations:

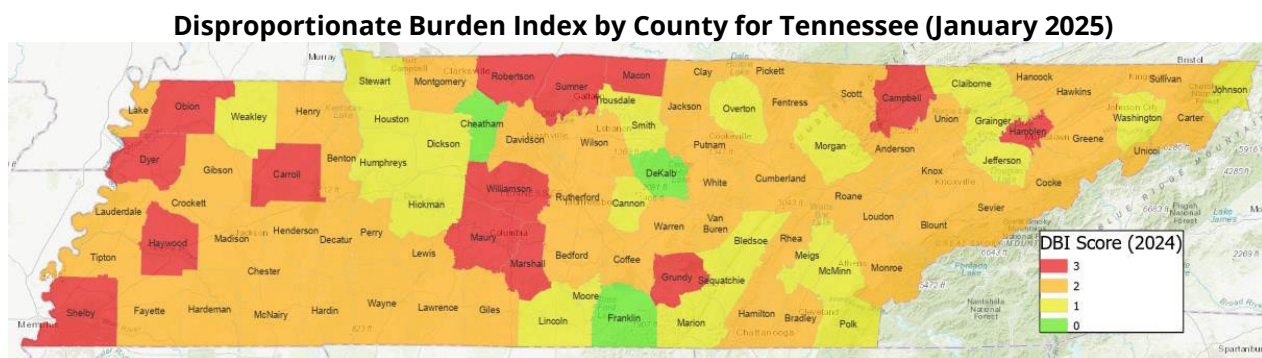
- Any information submitted in response to the solicitation for the State of Tennessee's Medium- and Heavy-Duty Vehicle Grant Program will be considered public record and will be subject to disclosure to the public. The VW EMT BMP and all documentation and records submitted by TDEC in support of each funding request to the Trustee will be available to the public on the TDEC Webpage, which is accessible at <https://www.tn.gov/environment/VWSettlement>. Funding requests submitted by TDEC to the Trustee will also be made available to the public via the Trustee Public Website, which is accessible at <https://www.vwenvironmentalmitigationtrust.com/>. Summarized details regarding the expenditure of Trust Funds by TDEC (e.g., cumulative totals for categories of eligible mitigation actions identified in the BMP, identification of recipients of Trust funds and their project scopes) will be maintained on the TDEC Webpage. Documentation and records supporting all expenditures of the Trust Funds by TDEC will be made publicly available. The general public may request such information by submitting a records request to TDEC. Specific request instructions are provided on the TDEC Webpage, including the name, title, and contact information for the TDEC staff tasked with responding to such records requests. By submitting an application for a grant, applicants agree to allow the use of applicant and project information as provided in application and grant documents to be published or distributed in various print or electronic media publications.
- TDEC reserves the right to not award funds to applicants that have:
 - Failed to submit a complete application;
 - Exhibited poor performance in complying with the requirements of grant contracts with the State of Tennessee; or
 - Regulatory and/or programmatic compliance issues with the State of Tennessee (e.g., is not in compliance with current environmental regulations enforced by TDEC).
- The Applicant shall certify that:
 - He/she understands that the elements of Title VI compliance correspond to requirements for Title VI as provided for in 42 U.S.C. § 2000(d) and in Tenn. Code Ann. § 4-21-904; that the applicant's organization has either adopted and implemented these elements of compliance or has agreed to adopt and implement TDEC's compliance resources as its own; and that he/she understands that the applicant organization's eligibility for federal funding is contingent upon satisfaction of and adherence to these compliance requirements by the applicant organization or by any contractor or subcontractor associated with the project;
 - The applicant's organization has successfully submitted and received notification of completion for its annual Title VI Compliance application;
 - He/she understands that if the applicant organization is awarded a grant by TDEC, the applicant will need to show evidence of completion of Title VI training when requested by the TDEC grant-administering program;
 - He/she understands the scappage requirements of this grant program and that he/she will comply with these requirements;
 - He/she has read and understands the reporting requirements and that she/she will comply with these requirements;

- All vendors will be selected in accordance with State public contracting laws; and
- He/she, along with any other officers, directors, owners, partners, employees, or agents of the applicant organization is (are) not presently debarred, suspended, proposed for debarment, or declared ineligible for an award by any State or Federal agency.
- TDEC may terminate and cancel these Program at any time.

APPLICATION EVALUATION:

TDEC will conduct a comprehensive review of all complete and eligible grant applications, including all required supporting documentation (see the list of required supporting documentation in the Application Requirements section below). Applications will be competitively evaluated based solely on the data provided; therefore, completeness and accuracy are important. Each applicant is responsible for submitting all relevant, factual, and correct information with the application. Funding will be awarded based on the merits of the applications. Please note that TDEC may select parts of a proposal for funding and may offer to fund less than the eligible grant amounts and/or a smaller amount than requested in the application.

Disproportionate Burden Index: To consider the potential beneficial impact of selected projects on air quality in areas that bear a disproportionate share of the air pollution burden, the State has developed a “Disproportionate Burden Index” (DBI), which combines environmental, economic, and demographic datasets in a geospatial format to determine geographic units in Tennessee that have the highest air quality burden. Given that the disproportionate burden is relative to the location of a project, TDEC will utilize the DBI and its geospatial display during the proposal review phase to assist with project prioritization and selection, focusing on the location and/or service area of the proposed project. For more information on the DBI, refer to Section VI. Consideration of Disproportionate Burden and Appendix 7 – Identification of Areas that Bear a Disproportionate Share of Air Pollution of the State of Tennessee’s Beneficiary Mitigation Plan.¹⁰ A DBI map of Tennessee by county, dated January 2025, is available below for reference.



A dynamic version of the above DBI map may be accessed here: <https://arcg.is/1i4Orm1>.

¹⁰ https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/TDEC%20VW%20EMT%20BMP_Updated%205.22.19.pdf.

In addition to the above-mentioned criteria, projects will be evaluated, in part, on the following additional criteria:

- Expected NOx emission reductions from the proposed project;
- Cost-effectiveness of the project;
- Whether the vehicles will operate primarily in a former nonattainment area for Ozone and/or PM 2.5 NAAQS;
- Whether the vehicles will operate primarily in a Distressed county;
- Potential impact to vulnerable populations or populations affected by a disproportionate share of the air pollution burden, evaluated using the DBI and any additional information provided by the applicant;
- Community benefits to be achieved as a result of the project, including whether the project will strengthen emergency preparedness and resiliency of the transportation sector through diversity of fuel and project types; and
- Whether the project will result in the establishment of a new refueling station or an expanded refueling station such that the station will have expanded fueling capacity installed during the period of performance, including expanded fuel storage, increased compressor capacity, or increased fueling rate.

Projects may be determined to be incomplete and ineligible for an award if the information provided in the application:

- Requests funding to replace and/or purchase a non-eligible vehicle, rebuild an existing vehicle, or remanufacture an existing engine;
- Requests funding for greater than the maximum allowable grant amount; and
- Does not include some or all of the required supporting documentation (see the list of required supporting documentation in the Application Requirements section below).

APPLICATION REQUIREMENTS:

Applicants must complete and provide the items listed below within the grant application. Details for completing the items below are provided in this Application Manual.

- Applicants must complete and submit the State of Tennessee Volkswagen Diesel Settlement Environmental Mitigation Trust Medium- and Heavy-Duty Vehicle Grant Application, accessible at <https://tdec.smartsimple.com/>.
- The application must state the intent of the applicant and all project partners to:
 - Maintain operations in Tennessee for a minimum of five years;¹¹
 - Comply with scrappage requirements;
 - Register all purchased vehicles within Tennessee;
 - Comply with related Title VI requirements;
 - Comply with reporting requirements; and
 - Comply with the requirement that all vendors will be selected in accordance with State public contracting laws.

Application Materials:

¹¹ Applicants selected to receive grant funding will be required to submit annual reports for a period of five years following vehicle procurement, delivery, and the placement of vehicles into service.

- If vehicles are expected to operate in multiple counties, applicants must detail the expected breakout in the percentage of time that the vehicle(s) will operate in each county and must provide supporting documentation to justify this breakout (e.g., driving routes of the vehicles to be replaced).
- The application must include a project description, which must contain:
 - Information on the expected operation of Medium- and Heavy-Duty Vehicle(s) to be purchased or **Repowered** (i.e., whether the vehicle will be in service on a daily, weekly, or monthly basis and the expected length of vehicle trips; where the vehicle is expected to travel (will it serve a local route, regional route, state-wide route), the highways/roadways that the vehicle is expected to travel on, etc.), supported by additional detail or documentation on the driving routes and previous annual mileage of the vehicle(s) to be replaced or **Repowered**;
 - A description of the community benefits to be achieved as a result of the project; and
 - A description of any emergency preparedness benefits to be achieved as a result of the project, including whether the project will strengthen resiliency of the transportation sector through diversity of fuel and project types.
 - A confirmation of whether the grant-funded vehicles will be leased to a third-party operator and if so, a description of such plans (e.g., identified lessee(s) (if known), lessee organization type, intended length and terms associated with the lease contract, etc.) as well as an explanation to affirm how the applicant will ensure compliance with all reporting and operations requirements;
 - For Medium- and Heavy-Duty Vehicle(s), a narrative on how the vehicles proposed for **Repower** or replacement have been used (based on applicable definitions)
- For each vehicle to be replaced, applicants must provide the following information:
 - EMA Category (***Class 4-7 Local Freight Truck, Class 8 Local Freight Truck / Port Drayage Truck, Class 4-8 Transit and Shuttle Bus, and Class 4-8 School Bus***)
 - Vehicle Make and Model
 - Vehicle Model Year
 - Vehicle Identification Number (VIN), with supporting images
 - Gross Vehicle Weight Rating (GVWR)
 - Engine Make and Model, with supporting images of the engine serial number
 - Engine Horsepower
 - Engine Model Year
 - EPA Engine Family Name, with supporting images
 - Annual Average Miles
 - Passenger Capacity
 - Fuel Type
- For each proposed new vehicle purchase, applicants must provide the following information:
 - EMA Category (***Class 4-7 Local Freight Truck, Class 8 Local Freight Truck / Port Drayage Truck, Class 4-8 Transit and Shuttle Bus, and Class 4-8 School Bus***)
 - Vehicle Make and Model
 - Vehicle Model Year
 - Gross Vehicle Weight Rating (GVWR)
 - Engine Make and Model
 - Engine Horsepower
 - New Vehicle Purchase Price
 - Expected Annual Average Miles

- Passenger Capacity
 - Fuel Type
- For each proposed **Repower**, applicants must provide the following information:
 - EMA Category (***Class 4-7 Local Freight Truck, Class 8 Local Freight Truck / Port Drayage Truck, Class 4-8 Transit and Shuttle Bus, and Class 4-8 School Bus***)
 - New Engine Make and Model
 - New Engine Horsepower
 - New Engine Model Year
 - Eligible **Repower** Costs
 - Expected Annual Average Miles
 - Fuel Type
 - Estimated Emissions Benefit (lbs. of NOx reduced)
 - Estimated Cost Effectiveness (\$/lb. of NOx reduced)
- The application must contain an estimate of the expected lifetime NOx emissions reduction for each proposed Medium- and Heavy-Duty Vehicle replacement or **Repower**, calculated using the Argonne National Laboratory Heavy-Duty Vehicle Emissions Calculator (accessible at <https://afleet-web.es.anl.gov/hdv-emissions-calculator/>). When utilizing the Heavy-Duty Vehicle Emissions Calculator, applicants should take the following steps:
 - For "Project Type," select, "Environmental Mitigation with Scrappage" if you are proposing a vehicle replacement.
 - Select, "Environmental Mitigation with **Repower**" if you are proposing a **Repower**.
 - For "State," select, "Tennessee."
 - For "Vehicle Type," select one of the following options based on the duty cycle and application of the proposed vehicle being replaced or **Repowered**:
 - For "Number of Vehicles," insert "1."
 - For "Model Year of Scrapped Vehicle" or "Model Year of Repowered Vehicle," insert the **engine model year** of the vehicle to be replaced or engine to be **Repowered**.
 - Note: The engine model year may differ from the vehicle model year. The first character of the engine's EPA engine family name identifies the engine model year. For more information on EPA engine family names, please refer to this link: <https://www.epa.gov/vehicle-and-engine-certification/information-about-family-naming-conventions-vehicles-and-engines>. For more information on how to locate the EPA engine family name on the engine's emission control label, please refer to Appendix B - Locating the EPA Engine Family Name.
- For "Estimate Years for Early Retirement of Scrapped Vehicle," calculate **based on vehicle model year and the life expectancy of the vehicle in years** (e.g., if a vehicle model year 2009 Medium- and Heavy-Duty Vehicle with an 18-year life expectancy is to be **Scrapped** and retired in 2026, the vehicle will be retired one year early).
 - If an applicant believes that the useful life for the vehicle to be replaced is greater than 18 years the applicant will be required to provide supporting documentation to justify this input, including vehicle operations and maintenance records as well as a signed letter from a mechanic to corroborate that the applicant's reported useful life remaining is realistic, given the existing vehicle's current operational and maintenance status.
- For "Lifetime of New Vehicle," insert "18."
 - As noted above, if an applicant believes that the useful life of the new vehicle will

be greater than the prescribed useful life of 18 years for Medium- and Heavy-Duty Vehicles, the applicant can enter a higher new vehicle lifetime. Applicants pursuing this option will be required to provide supporting documentation to justify such assumptions, including vehicle operations and maintenance records to demonstrate that comparable vehicles are maintained within the fleet for the suggested, alternate vehicle life.

- For “Annual Miles of Scrapped Vehicle,” insert the average annual mileage of the vehicle to be replaced.
 - For “Annual Miles of New Vehicle,” insert an appropriate estimate for the annual miles of the new vehicle, based on previous annual mileage of the vehicle to be replaced.
 - **Do not** select the option for the “Diesel In-Use Multiplier.”
 - Only select the option for the Low NOx engine if proposing to purchase a new Medium- and Heavy-Duty Vehicle with this type of engine.
 - For “Funding Options,” insert only the amount of grant funding requested under the appropriate fuel type for the specific Medium- and Heavy-Duty Vehicle replacement or **Repower**, based on the applicant entity type and geographic location.
 - For “Natural Gas Feedstock Source,” select “North American NG,” unless the proposed project is to utilize natural gas from landfill gas, anaerobic digester (AD) gas of animal waste, AD gas of wastewater sludge, or AD gas of municipal solid waste.
 - If proposing to purchase an **All-Electric** Medium- and Heavy-Duty Vehicle or to **Repower** a Medium- and Heavy-Duty Vehicle, for “Source of Electricity,” select “Custom Mix.” Within the Custom Mix section, insert the following:¹²

Heavy Duty Vehicle Emissions Calculator Power Source Inputs	Percent Share (in 2023)*
Residual Oil	0.1%
Natural Gas	19.3%
Coal	20.2%
Nuclear	48.8%
Biomass	0.1%
Renewable (e.g., wind, solar)	11.5%
Total must add up to 100%	

*Data collected by the U.S. Energy Information Administration, net generation for electric power in Tennessee, 2023.

- Select “Calculate Results,” and then “Export Results.” Save the file and provide it as an attachment to the application.
- For applicants proposing the replacement or **Repower** of Emergency Response Vehicles with bi-fuel vehicle and/or engine options, perform the emissions reduction calculations as instructed above. Once the emissions reduction estimate has been

¹² Inputs for future VW EMT solicitations will be based on the net generation for electric utilities in Tennessee as reported by EIA for the calendar year preceding the release of the solicitation.

processed, multiply the New Vehicle Emission Benefits for the appropriate alternative fuel's NOx total by 0.7, to calculate only 70% of the emissions benefit based on the bi-fuel vehicle's assumed fuel consumption. Divide the grant funding amount requested (same amount as noted under "Funding Options") by this new NOx total number to achieve the New Vehicle Cost Effectiveness in \$/lb. (e.g., a natural gas truck's estimated New Vehicle Emission Benefit for NOx is 1,000 lbs.; multiply 1,000 lbs. by 0.7 to achieve a bi-fuel estimated New Vehicle Emission Benefit of 700 lbs.; divide the grant amount requested under Funding Options for the bi-fuel vehicle, assumed to be \$50,000 for this example, by the New Vehicle Emission Benefit of 700 lbs. to achieve a cost-effectiveness rating of \$71.43 spent per pound of NOx reduced).

- Repeat this process for each proposed Medium- and Heavy-Duty Vehicle replacement or **Repower**.
- The application must contain documentation confirming the existence of refueling infrastructure available in Tennessee to supply eligible vehicles to be supported with grant funds.
 - For existing refueling stations, the applicant must provide a letter from the owner or operator stating that the refueling station is or will be capable of supporting the projected fuel consumption within the grant period of performance.
 - For proposed new refueling stations, the applicant must provide a letter from the owner/operator stating that the refueling station will be online and will be capable of supporting the projected fuel consumption within the grant period of performance.
- The application must include a budget justification and supporting documentation to detail the calculations or assumptions used to arrive at the total purchase cost of eligible Medium- and Heavy-Duty vehicles; the cost of eligible Medium- and Heavy-Duty Vehicle **Repowers**, including the cost of engine, tank, and/or other parts installation; the total acquisition and installation costs of associated **All-Electric** infrastructure (if applicable), the total grant amount requested, cost share, and/or expected payback. Supporting documentation should include detailed cost estimates from potential vendors for each proposed expenditure.
- The application must contain a letter of financial commitment from each expected cost share contributor. Each letter shall state the amount and source of funds to be contributed to the project.
- The applicant must verify that its organization has successfully submitted its annual Title VI Compliance application and has received notification of completion. The annual Title VI Compliance application requires the following:
 - Demographic Data from the U.S. Census;
 - The applicant's Non-Discrimination Policy;
 - The applicant's Limited English Proficiency Plan;
 - A copy of the applicant's Title VI training program; and
 - A copy of the applicant's procedures for reviewing Title VI complaints.

For questions regarding the annual Title VI Compliance application or to check on the status of an application, please contact TDEC.Grants@tn.gov. For questions specific to Title VI requirements, please contact TDEC.TitleVI@tn.gov.

Note: For questions regarding natural gas refueling infrastructure, please contact the Tennessee Gas Association at 615-927-5069. For questions regarding propane autogas refueling infrastructure, please contact the Tennessee Propane Gas Association at 615-256-8742. For questions regarding **All-Electric**

infrastructure, please contact the applicant organization's Local Power Company.

GENERAL GRANT AND CONTRACT CONDITIONS:

- Projects selected for funding will receive a letter addressed to the contact person specified in the application.
- After the announcement of a grant award, TDEC OEP will forward a Grant Contract to the recipient. Grantees will be required to execute (sign) the Grant Contract, which will include a detailed scope-of-work, project schedule, budget, and other information.
- Grantees will be required to obtain a vendor identification number and will need to submit a Form W-9, Request for Taxpayer Identification Number and Certification. Grantees will also be required to submit bank information via an original Automated Clearing House (ACH) form, in order to receive grant reimbursements electronically. The ACH form must be signed by an authorized account representative and a representative of the associated financial institution.
- Procurement of vehicles shall be made on a competitive basis, including the use of competitive bidding procedures, where practical. In each instance where it is determined that use of a competitive procurement method is not practical, supporting documentation shall include a written justification for the decision and for use of a non-competitive procurement. The Grantee shall obtain prior approval from the State before purchasing any equipment under the Grant Contract.
- TDEC will make payment to the Grantee based on review of reimbursement requests detailing vehicle, **Repower**, and/or infrastructure costs with accompanying invoices, actual costs at time of purchase, and documentation of the delivery and/or **Repower** of the vehicle(s). TDEC will not fund costs in excess of the requested grant amount. For vehicles that are expected to utilize new refueling stations, TDEC will not make payment unless said refueling stations are operable.
- Grantees will be reimbursed for costs incurred by the Grantee only during the grant period of performance.
- Reporting:
 - The Grantee must submit quarterly reports to include updates on procurement, vehicle operator training, **Repower** status, and refueling infrastructure until the grant-funded Medium- and Heavy-Duty Vehicles are purchased, delivered, and put into service; Repowered and put into service (if applicable); and the engines and/or vehicles to be **Repowered** or replaced are **Scrapped**. Such reports shall include a complete description of the status of the project (including actual or projected termination date), development, implementation, and any modification.¹³
 - Quarterly reports shall be due no later than January 10, April 10, July 10, and October 10 of each year of the Grant Contract term.
 - Grantees will be required to submit annual reports for a period of five years following vehicle procurement, delivery, and the placement of vehicles into service. Such reporting shall include the demonstrated usage of fuel in purchased vehicles, the number of DGEs or gallons purchased, purchase price, refueling locations, miles

¹³ Beneficiaries of the EMT are required to submit this information to the Trustee for each EMA. Beneficiary reporting obligations are outlined in Section 5.3 of the State Trust Agreement.
https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020.pdf.

- driven, driving or route habits, metrics regarding emissions reductions, and savings or cost avoidance.
- Grantees must submit a final project report within three months of the completion of the grant period. (Please note that this report may be combined with the annual report for the final year of the grant period.) In addition to the information requested for the annual report, the final project report must also include cumulative financial information to match the final reimbursement request as well as inventory documentation for all equipment or vehicles purchased with funding through the Grant Contract. The inventory documentation must include, at a minimum, the following:
 - a. Description of the equipment or vehicles;
 - b. Manufacturer's serial number or other identification number, when applicable;
 - c. Consecutive inventory equipment or vehicles tag identification;
 - d. Acquisition date, cost, and check number;
 - e. Fund source, State Grant number, or other applicable fund source identification;
 - f. Percentage of state funds applied to the purchase;
 - g. Location within the Grantee's operations where the equipment or vehicles are used;
 - h. Condition of the property or disposition date if Grantee no longer has possession;
 - i. Depreciation method, if applicable; and
 - j. Monthly depreciation amount, if applicable.
 - Failure to submit quarterly, annual, or final reports may result in the required refund of any and all payments made to the Grantee by the State.
 - The Grantee will use quarterly, annual, and final report templates provided by TDEC. These templates will be referenced in the Grant Contract and will be attached to the corresponding Grant Program Manual.
 - The Grantee will be responsible for providing all the information required to complete the reports.
 - TDEC will exercise stewardship in overseeing the project activities performed under the Grant Contract. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to address deficiencies that develop during the project; assuring compliance with Grant Contract terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.
 - Accounting and Financial Controls:
 - Grantees must properly manage and account for funding received. A complete spending record for all expenditures will be required, including invoice receipts, logs of record and other properly certified documents.
 - Only vehicles purchased within the period of performance of a fully executed and approved Grant Contract shall be eligible for reimbursement. No credit will be given for costs incurred prior to the grant period of performance. Documentation will be required for all funds requested. Any applicant who starts a project and incurs costs before receiving a fully executed Grant Contract does so at its own risk.

- All funding must be spent in accordance with the Grant Contract.
- TDEC reserves the right to terminate the Grant Contract and/or recover funding from Grantees that TDEC determines are not in compliance with the conditions of this solicitation or the Grant Contract.
- TDEC will not automatically grant project extensions. Requests for extensions will be evaluated on a case-by-case basis.
- TDEC reserves the right to monitor projects and to audit any Grantee's financial transactions or compliance with the Grant Contract.
- Public Notice: OEP encourages Grantees to publish or otherwise make publicly available the results of work performed and vehicle purchases made under Grant Contracts. All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by Grantees in relation to a Grant Contract should include the statement, "This project was funded in part under a Grant Contract with the State of Tennessee's Department of Environment & Conservation, under the State of Tennessee Volkswagen Diesel Settlement Environmental Mitigation Trust Medium- and Heavy-Duty Grant Program."

DEFINITIONS:

The following definitions are set forth in Appendix D-2 of the State Trust Agreement:¹⁴

"All-Electric" shall mean powered exclusively by electricity provided by a battery, fuel cell, or the grid.

"Alternate Fueled" shall mean an engine, or a vehicle or piece of equipment that is powered by an engine, which uses a fuel different from or in addition to gasoline fuel (e.g., CNG, propane, Biodiesel).

"Class 4-8 Shuttle Bus, Transit Bus, and School Bus (Buses)" shall include vehicles that provide transportation services for one or more specific entities, intra-terminal or intra-facility transportation services, or mobility-on-demand services.

"Class 4-7 Local Freight Trucks (Eligible Medium Trucks)" shall mean trucks, including commercial trucks, used to deliver **Cargo and Freight** (e.g., courier services, delivery trucks, box trucks moving freight, waste haulers, dump trucks, concrete mixers) with a Gross Vehicle Weight Rating (GVWR) between 14,001 and 33,000 lbs.

"Class 8 Local Freight, and Port Drayage Trucks (Eligible Large Trucks)" shall mean trucks with a Gross Vehicle Weight Rating (GVWR) greater than 33,000 lbs. used for port drayage and/or freight/cargo delivery (including waste haulers, dump trucks, concrete mixers).

"CNG" shall mean Compressed Natural Gas.

"Diesel Gallon Equivalent (DGE)" shall mean the amount of alternative fuel it takes to equal the

¹⁴ State Trust Agreement, App'x D-2, https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020.pdf.

energy content of one liquid gallon of diesel.

“Drayage Trucks” shall mean trucks hauling cargo to and from ports and intermodal rail yards.

“Emergency Response Vehicle” shall mean any vehicle that is designated and authorized to respond to an emergency situation that threatens or negatively impacts public health, safety, and welfare. These vehicles are usually operated by designated government agencies or first responders (including fire, police, and emergency medical personnel), but may also be operated by charities, non-governmental organizations, and some commercial companies. Examples of emergency response vehicles include police cars, firetrucks, ambulances, and other similar on-road vehicles necessary for transporting first responders, other emergency services personnel, patients, and equipment in times of emergency.

“Government” shall mean a State or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority, owning fleets purchased with government funds), and a tribal government or native village. The term “State” means the several States, the District of Columbia, and the Commonwealth of Puerto Rico.

“Gross Vehicle Weight Rating (GVWR)” shall mean the maximum weight of the vehicle, as specified by the manufacturer. GVWR includes total vehicle weight plus fluids, passengers, and cargo.

- Class 1: < 6000 lb.
- Class 2: 6001-10,000 lb.
- Class 3: 10,001-14,000 lb.
- Class 4: 14,001-16,000 lb.
- Class 5: 16,001-19,500 lb.
- Class 6: 19,501-26,000 lb.
- Class 7: 26,001-33,000 lb.
- Class 8: > 33,001 lb.

“Hybrid” shall mean a vehicle that combines an internal combustion engine with a battery and electric motor.

“Infrastructure” shall mean the equipment used to enable the use of electric powered vehicles (e.g., electric vehicle charging station).

“Port” shall refer to facilities along navigable water for the loading and unloading of cargo from ships; places from which aircraft operate that have paved runways and passenger and cargo terminals which include baggage-movement and passenger-transit operations; or nodes in the larger goods movement supply chain, to include cruise terminals, bulk terminals, container terminals, and intermodal container transfer facilities.

“Repower” shall mean to replace an existing engine with a newer, cleaner engine or power source that is certified by EPA and, if applicable, CARB, to meet a more stringent set of engine emission standards. Repower includes, but is not limited to, diesel engine replacement with an engine certified for use with diesel or a clean alternate fuel, diesel engine replacement with an

electric power source (e.g., grid, battery), diesel engine replacement with a fuel cell, diesel engine replacement with an electric generator(s) (genset), diesel engine upgrades in Ferries/Tugs with an EPA Certified Remanufacture System, and/or diesel engine upgrades in Ferries/Tugs with an EPA Verified Engine Upgrade. All-Electric and fuel cell Repowers do not require EPA or CARB certification.

“Scrapped” shall mean to render inoperable and available for recycle, and, at a minimum, to specifically cut a 3-inch hole in the engine block for all engines. If any Eligible Vehicle will be replaced as part of an Eligible project, Scrapped shall also include the disabling of the chassis by cutting the vehicle’s frame rails completely in half.

The State has defined additional terms for purposes of administering this Program:

“Bi-fuel” shall refer to an engine or motor vehicle that is capable of operating on gasoline or diesel fuel in addition to another type of fuel, such as natural gas or propane. Both fuels are stored on board and the driver can switch between the fuels. The vehicle is equipped with fuel tanks, fuel injection systems, and fuel lines for both fuels.

“Grantee” shall mean an applicant that has an executed Grant Contract with TDEC.

“Local” shall refer to vehicles that operate in Tennessee counties for 70% or more of the time.

“Original Equipment Manufacturer (OEM)” shall mean the entity that originally manufactures the engine or the vehicle for sale.

“Shuttle Buses” shall include vehicles that provide transportation services for one or more specific entities, intra-terminal or intra-facility transportation services, or mobility-on-demand services.

“Transit Buses” shall include all vehicles that provide public transportation, which shall mean regular and continuing shared-ride surface transportation services that are open to the general public.

PROGRAM CONTACT:

All communications (regular mail, express mail, electronic mail, or fax), concerning this application and award process must be addressed to:

The Office of Energy Programs – Volkswagen Diesel Settlement Environmental Mitigation Trust
Tennessee Department of Environment and Conservation
C/o Mark Finlay, Senior Energy Analyst
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, TN 37243
615-772-6011
Mark.Finlay@tn.gov

APPENDIX A – EXAMPLE VEHICLE COST ESTIMATE

TO:

Applicant Name
Address
Point of Contact
Telephone Number
Email Address

FROM:

OEM/Dealer Name
Address
Point of Contact
Telephone Number
Email Address

DATE:

VEHICLE:

Vehicle Model Year:
Fuel Type: (*propane, compressed natural gas [CNG], All-Electric**)
Passenger Capacity:
Gross Vehicle Weight Rating (GVWR):
Engine Make and Model:
Horsepower:

QUANTITY:

Standard Vehicle/Body and Chassis	\$XX,XXX.XX
CNG/Propane/Electric Engine Prep and/or Powertrain Package (<i>if selected</i>)	\$XX,XXX.XX
Vehicle Delivery Fees	\$XX,XXX.XX
Taxes	\$XX,XXX.XX
TOTAL**	\$XX,XXX.XX

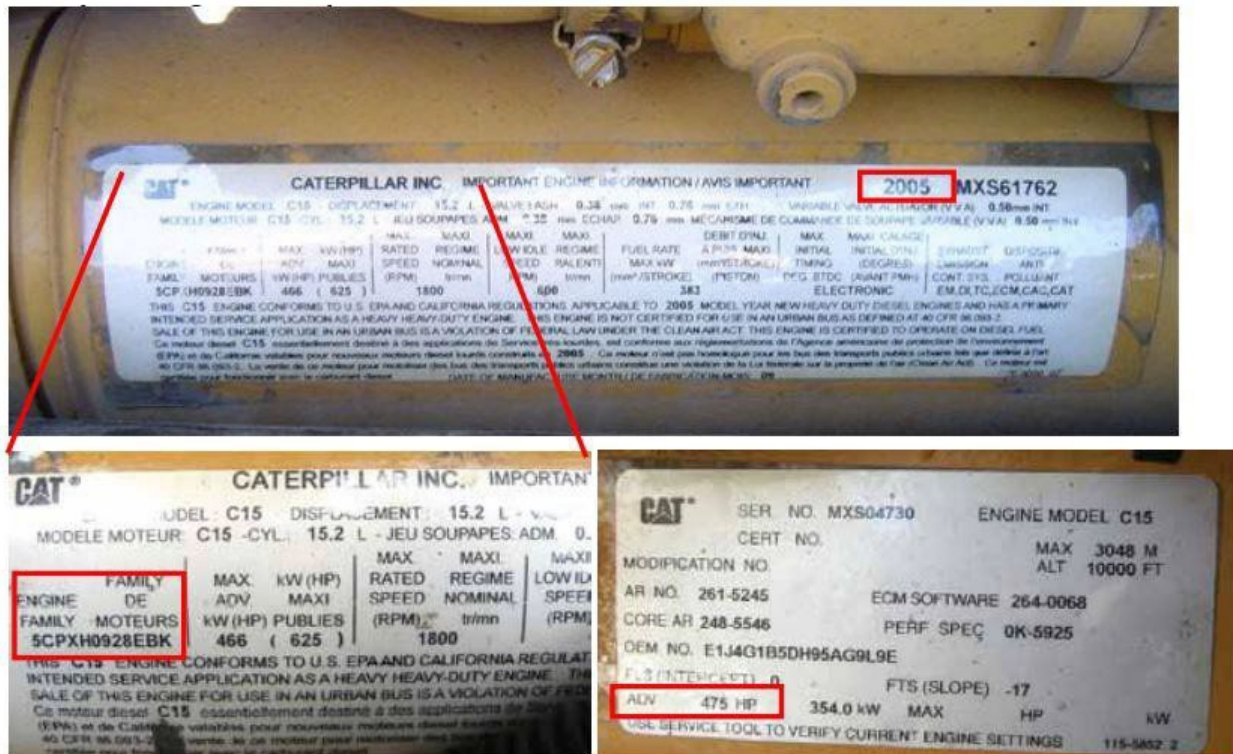
*If the applicant's grant application includes associated charging infrastructure for **All-Electric** Vehicle, related cost estimates or quotes for the acquisition and installation of such shall be addressed and included within a separate attachment.

**Costs not integral to Medium- and Heavy-Duty Vehicle function (e.g., idle reduction technologies, optional diesel after-treatment devices, etc.) cannot be considered eligible for reimbursement. Cost estimates provided as supporting documentation along with the application must detail any such costs in an itemized fashion.

APPENDIX B – LOCATING THE EPA ENGINE FAMILY NAME

The EPA engine family name is a 12-character number/letter designation included on the engine nameplate for all heavy duty engines sold in the United States. In general, the nameplate is permanently affixed to the engine. The exact location and appearance of the nameplate varies by engine manufacturer. Examples of nameplates from three major engine manufacturers are included below:¹⁵

Caterpillar Engine Example:



Caterpillar Nameplate (2 labels): EPA Family Name – 5CPXH0928EBK

Engine Model Year – 2005

Engine Horsepower – 475 HP

Additional examples are including on the following page.

¹⁵ <https://efc.umd.edu/assets/nameplatephotos.pdf>.

Engine Cert. Id.	Displacement	15	GPL 8520	Model	ISX 400BT
Certificat	Displacement	244	min/Stroke	Engine No.	79039661
Advertised HP	2000	rpm	Family	4CEXHD912XA	
Autoclave (in)	400	in.	Ref. No.	20571906	
Leak Cold (mm)	.356	in.			
Leak Hot (mm)	.686	in.			
Leak Cold (mm)	.356	in.			
Leak Hot (mm)	.686	in.			

CEL	EPA	ARB	E.C.S. PCMEGR
NOx NMHC	2.5	2.5	Date of Mfg. 03/04
PM	.10	.10	Date of Fabrication
			Timing - T.O.C. (in/valve) 66
			Crane - P.M.H. (in/valve) 66
			Idle Speed (RPM) 580-620
			Viscosity

ASSEMBLED IN THE U.S.A.

3682990

Engine Horsepower – 400 HP

IMPORTANT ENGINE INFORMATION

2005 THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA
505 REGULATIONS APPLICABLE TO 2005 MODEL YEAR NEW HEAVY-DUTY
DIESEL CYCLE ENGINES. THIS ENGINE HAS A PRIMARY INTENDED
SERVICE APPLICATION AS A HEAVY HEAVY-DUTY ENGINE.

FUEL RATE AT ADV. HP 302.0 MM3/STROKE ADV. HP 515 AT 1800 RPM VALVE LASH
INITIAL INJECTION TIMING 13 DEG. BTC DISP. 14.0L EXHAUST .508 MM
ENGINE FAMILY 500XH14.0ELY MIN. IDLE 600 RPM INTAKE .203 MM
MODEL SERIES 60, 14.0L MFG. DATE APR 2005 L15117
UNIT 06R083B490

Engine Horsepower – 515 HP