



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

Massachusetts Volkswagen (VW) and Refuse Truck Electric Solicitation: Application Guidance and Grant Requirements

July 2023

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

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Background

In 2015, enforcement actions against Volkswagen (VW) and its subsidiaries¹ were initiated after it was discovered that VW illegally installed defeat devices in millions of Volkswagen, Audi and Porsche diesel vehicles worldwide,² causing these vehicles to emit higher-than-allowed amounts of nitrogen oxides (NO_x). The settlement of the enforcement actions led to the creation of the *Volkswagen Diesel Emissions Environmental Mitigation Trust for State Beneficiaries, Puerto Rico and the District of Columbia* (VW Trust) to fund actions that mitigate the excess NO_x emissions. The Commonwealth of Massachusetts was allocated approximately \$75 million of these Trust funds, and the Massachusetts Department of Environmental Protection (MassDEP) was designated the lead agency to administer the funds on behalf of the Commonwealth.

As part of its expenditure of VW funds, MassDEP is offering this \$7.5 million VW Electric Solicitation to public and private entities to fund eligible electrification projects that will offset the excess NO_x emissions that were emitted. This VW Electric Solicitation reflects the goals of the *Massachusetts Volkswagen Settlement Beneficiary Mitigation Plan* (BMP)³ and its amendments,⁴ which established the Commonwealth's plan for investing the funds to achieve better air quality, cleaner and technologically advanced transportation, and healthier communities across the state.

This solicitation also includes \$4 million for curbside waste and recycling collection vehicles, funded by the Climate Protection and Mitigation Expendable Trust (CMT).⁵ This funding meets a commitment of the *2030 Solid Waste Master Plan*⁶ to promote and encourage the electrification of solid waste collection vehicles, including waste collection and recycling trucks operating and traveling in Massachusetts environmental justice (EJ) communities. This funding will facilitate the ongoing municipal transition to electric fleets. While collecting and transporting residential waste, refuse trucks typically travel through multiple EJ communities, so replacing older diesel vehicles with new electric vehicles will reduce greenhouse gas emissions and air pollution and deliver public health benefits to EJ communities where the vehicles operate and to EJ communities along the transportation corridors where the vehicles travel.

MassDEP is committed to advancing equity, diversity, and environmental justice through its public investments. The agency seeks to prioritize the direction of these resources to benefit EJ communities and to address environmental inequities. To that end, MassDEP grant and funding programs include criteria and evaluation parameters that emphasize equity, diversity, and environmental justice, consistent with each program's statutory authority and source of funding.

¹ Volkswagen AG, Audi AG, Porsche Cars of North America, Inc., Volkswagen Group of America, Inc., Volkswagen Group of America Chattanooga Operations, LLC Dr. Ing. h.c. F. Porsche AG, and Porsche Cars North America, Inc.

² VW installed the devices in over 11 million vehicles worldwide, including 590,000 in the U.S. and over 14,000 in Massachusetts.

³ <https://www.mass.gov/files/documents/2018/12/07/vw-finalbmp.pdf>

⁴ <https://www.mass.gov/doc/amendment-to-massachusetts-volkswagen-settlement-beneficiary-mitigation-plan-december-2019/download> and <https://www.mass.gov/doc/amendment-to-massachusetts-volkswagen-settlement-beneficiary-mitigation-plan-april-2023/download>

⁵ <https://web.archive.org/web/20221223003905/https://www.mass.gov/news/baker-polito-administration-announces-over-100m-commitment-to-clean-energy-and-transportation>

⁶ <https://www.mass.gov/doc/2030-solid-waste-master-plan-working-together-toward-zero-waste/download>

Who Can Apply

The VW portion of this Electric Solicitation is open to any entity, public or private, with an eligible diesel vehicle, engine, or piece of equipment that operates in Massachusetts, as further specified in *Eligible Projects* below. In addition, those owning gasoline-powered airport ground support equipment (GSE) that operates in Massachusetts may also apply.

The Refuse Truck portion of this Electric Solicitation is open to municipalities and entities that contract with municipalities to provide curbside waste and recycling collection with an eligible diesel vehicle that operates in Massachusetts, as further specified in *Eligible Projects* below.

How to Apply

This is a competitive grant application based on selection criteria. Applications must be submitted online as detailed below. A separate application must be submitted for each vehicle, engine, or piece of equipment to be replaced. **Completed grant applications must be received no later than 5:00 p.m., September 26th, 2023.**

Applicants must complete the online form at:

<https://massgov.formstack.com/forms/vwandrefusetruckelectricssolicitation> to provide contact information, describe the proposed project, identify existing and desired replacement equipment, and upload supporting documents. Required information includes equipment and project information such as:

1. Existing equipment identification numbers and other identifying and operational information
2. New equipment models and cost information
3. Vehicle routes and annual vehicle miles traveled
4. Annual fuel use and operating hours
5. Emissions reductions

All applicants must upload the following documents as part of the online application form. Additional documents may be required depending on your project type. You may also upload additional documents that will support the application.

1. MA W9 Form (available at https://www.macomptroller.org/wp-content/uploads/form_w-9.pdf)
2. Itemized cost quotes
3. If applicable, proof of existing equipment operation primarily (>50% of the time) in Massachusetts for at least the last two years
 - o Acceptable proof is the two most recent copies of the MA vehicle inspection report (available at <https://www.mavehiclecheck.com/apps/vir-lookup-tool>) or, for non-inspected equipment, at least two years of operational or fuel records. If only the most recent vehicle inspection report is available, that, in addition to the vehicle's MA registration, is acceptable.
4. The United States Environmental Protection Agency (EPA) Diesel Emissions Quantifier (DEQ) output for NOx, particulate matter with a diameter of 2.5 micrometers or less (PM_{2.5}), hydrocarbons (HC), carbon monoxide (CO), carbon dioxide (CO₂), and particulate matter (PM) in spreadsheet format, or alternative emissions accounting methods if applicable (see *Emissions Calculations* section at the end of this document for details)

The maximum size limit for uploaded materials is 25 megabytes total, including all supplemental documents. If you need to submit more documentation, email it to vw.settlement@mass.gov

after submitting your application, referencing your application contact information, including project location address.

MassDEP may contact applicants for clarification and/or supplemental information. Applicants will have 10 calendar days to respond to any such request; otherwise, their grant application may not be considered by MassDEP. MassDEP will evaluate and select projects based on a complete grant application, including any requested clarifying or supplemental information.

The submission of an application does not constitute an award or guarantee funding.

Vehicles/engines/equipment must not be ordered, and no eligible installation work should be done, until Grantee receives an approval letter from MassDEP. In addition, Grantees receiving funding under the Refuse Truck portion of this Electric Solicitation must not accept equipment delivery or conduct any installation work prior to receiving an executed contract signed by MassDEP.

MassDEP reserves the right to recover any funding provided to the applicant and/or pursue any other legal actions deemed appropriate if MassDEP determines that the applicant did not provide complete and accurate information or fails to meet the requirements or intent of the program.

MassDEP reserves the right not to award 100% of the grant funding offered under this VW and Refuse Truck Electric Solicitation, and to grant only a portion of the maximum allowable funds per type of project.

If you have questions about this application, contact MassDEP at vw.settlement@mass.gov no later than 5 p.m. September 11th, 2023. MassDEP will post written responses to substantive questions 10 days before the application deadline.

Eligible Projects

Appendix D-2 of the VW Trust Agreement⁷ specifies ten Eligible Mitigation Actions (EMAs) that states can fund to mitigate the effects of the illegal NOx emissions. Under the \$7.5 million VW portion of this Electric Solicitation, MassDEP is seeking applications for EMAs 1 through 8 as detailed below.

Under the \$4 million Refuse Truck portion of this Electric Solicitation, MassDEP is seeking applications for projects as detailed below.

MassDEP will use its discretion in allocating selected all-electric refuse truck Grantees to VW or Refuse Truck funds: applicants do not need to consider this in applying. The allowed funding percentage (listed below) for all-electric refuse trucks is the same under the VW and Refuse Truck offering.

⁷ <https://www.vwcourtsettlement.com/wp-content/uploads/documents/DOJ/Approved%20Appendix%20D-2.pdf>

1. VW Projects

To be eligible for VW funds, existing equipment must meet the engine model year, usage, emission tier, and other requirements of each EMA listed below:

- **EMA 1 – Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)**
Eligible Large Trucks include 1992-2009 engine model year diesel-powered freight or drayage trucks weighing 33,001 pounds or more that have been operating primarily in the Commonwealth (i.e., at least half of its operating time/mileage) for at least the last 2 years. Examples include waste haulers, dump trucks, and concrete mixers.
- **EMA 2 – Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)**
Eligible Buses include 2009 engine model year or older diesel-powered school, shuttle, or transit buses weighing 14,001 pounds or more that are used to transport people and that have been operating primarily in the Commonwealth (i.e., at least half of its operating time/mileage) for at least the last 2 years.
- **EMA 3 – Freight Switchers**
Eligible Freight Switchers include pre-Tier 4 diesel-powered switcher locomotives that operate 1,000 or more hours per year in the Commonwealth and move rail cars around a rail yard.
- **EMA 4 – Ferries/Tugs**
Eligible Ferries and/or Tugs include unregulated, Tier 1, or Tier 2 diesel-powered marine engines that have been registered in the Commonwealth for at least the last 2 years. Tugs are dedicated vessels that push or pull other vessels in ports, harbors, and inland waterways (e.g., tugboats and towboats).
- **EMA 5 – Ocean Going Vessels (OGV) Shorepower**
Eligible OGV Shorepower includes systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth. Marine shore power systems must comply with international shore power design standards (ISO/IEC/IEEE 80005-1-2012 High Voltage Shore Connection Systems or the IEC/PAS 80005-3:2014 Low Voltage Shore Connection Systems) and should be supplied with power sourced from the local utility grid.
- **EMA 6 – Class 4-7 Local Freight Trucks (Eligible Medium Trucks)**
Eligible Medium Trucks include 1992-2009 engine model year diesel-powered trucks used to deliver cargo and freight weighing between 14,001 to 33,000 pounds that have been operating primarily in the Commonwealth (i.e., at least half of its operating time/mileage) for at least the last 2 years. Examples include courier services, delivery trucks, box trucks moving freight, waste haulers, dump trucks, and concrete mixers.

- **EMA 7 – Airport Ground Support Equipment (GSE)**
Eligible Airport GSE pertains to vehicles and equipment that are used at an airport to service aircraft between flights and that have been operating primarily in the Commonwealth (i.e., at least half of its operating time/mileage) for at least the last 2 years and includes:
 - Emission Tier 0, Tier 1, or Tier 2 diesel-powered airport GSE; and
 - Uncertified, or certified to 3 grams/brake horsepower-hour or higher emissions, gasoline spark ignition engine-powered airport GSE.

- **EMA 8 – Forklifts and Port Cargo Handling Equipment (CHE)**
Eligible Forklifts includes forklifts with greater than 8,000 pounds lift capacity used to lift and move materials short distances, generally with tines to lift objects, that have been operating primarily in the Commonwealth (i.e., at least half of its operating time/mileage) for at least the last 2 years. Eligible Forklifts include reach stackers, side loaders, and top loaders. Eligible Port CHE includes rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hostlers and yard tractors that operate within ports.

2. Refuse Truck Projects

To be eligible for refuse truck funds, existing equipment must meet the following requirements:

- **Eligible refuse trucks** include any engine model year, diesel-powered refuse trucks weighing 14,001 pounds or more (the size range covered by VW EMA 1 and 6) that have been operating primarily in the Commonwealth (i.e., at least half of its operating time/mileage) for at least the last 2 years. Examples include waste haulers, waste trucks and recycling trucks.

Eligible Technology Options

The primary technology options under this VW and Refuse Truck Electric Solicitation include:

- For VW:
 - Repowering (replacing) an engine with a new all-electric engine; and/or
 - Replacing an entire vehicle or piece of equipment with a new all-electric vehicle or piece of equipment.
- For refuse trucks:
 - Replacing an entire diesel vehicle with a new plug-in hybrid or all-electric vehicle.

All-electric engines are engines powered exclusively by electricity provided by a battery, fuel cell, or the grid.

Funding Levels and Costs Covered

1. VW Projects

The maximum amount of funds that MassDEP will allocate to a Grantee through this combined VW Electric and Refuse Truck Solicitation is \$500,000 per location. Funding levels for selected projects depend on the EMA, whether the project is government⁸ (GOV) or non-government (NON-GOV) owned, or operates in an environmental justice community (EJC). The tables below list the funding limits that MassDEP has established for the eight EMAs available under the VW portion of this solicitation. Grantees are required to use non-VW sources to fund the remainder of their project's purchase and installation costs. Grantees are prohibited from using applicable MOR-EV⁹ or Diesel Emissions Reduction Act (DERA)¹⁰ funding for any part of their cost share.

EMAs 1, 2 and 6 – Class 8 Local Freight Trucks and Port Drayage Trucks, Class 4-8 School, Shuttle, or Transit Buses, and Class 4-7 Local Freight Trucks

Technologies for EMAs 1, 2 and 6	Costs Covered	Allowed Funding %	
		NON-GOV (in EJC); GOV	NON-GOV (not in EJC)
Repower w/new all-electric engine	Engine purchase and installation; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%
Replace w/new all-electric vehicle	Vehicle purchase; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%

Note that under EMA 2 pertaining to school buses, a privately-owned school bus company under contract with a public school district is viewed as a government entity and can therefore obtain 60% in funding for a school bus project.

⁸ Appendix D-2 of the VW Trust Agreement defines "Government" as: *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.*

⁹ <https://mor-ev.org/>

¹⁰ <https://www.mass.gov/how-to/apply-for-a-diesel-emissions-reduction-act-dera-electric-solicitation-grant>

EMA 3 – Freight Switchers

Technologies for EMA 3	Costs Covered	Allowed Funding %	
		NON-GOV (in EJC); GOV	NON-GOV (not in EJC)
Repower w/new all-electric engine and/or genset	Engine and/or genset purchase and installation; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%
Replace w/new all-electric switcher and/or genset	Switcher and/or genset purchase; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%

EMA 4 – Ferries and Tugs

Technologies for EMA 4	Costs Covered	Allowed Funding %	
		NON-GOV (in EJC); GOV	NON-GOV (not in EJC)
Repower w/new all-electric engine	Engine purchase and installation; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%

EMA 5 – Shorepower for Ocean Going Vessels (OGV)

Technology for EMA 5	Costs Covered	Allowed Funding %	
		NON-GOV (in EJC); GOV	NON-GOV (not in EJC)
Shore-side system	Cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution	60%	25%

EMAs 7 and 8 – Airport Ground Support Equipment (GSE), and Forklifts and Port Cargo Handling Equipment (CHE)

Technologies for EMAs 7 and 8	Costs Covered	Allowed Funding %	
		NON-GOV (in EJC); GOV	NON-GOV (not in EJC)
Repower w/new all-electric engine	Engine purchase and installation; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%
Replace w/new all-electric equipment	Equipment purchase; purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	60%	45%

2. Refuse Truck Projects

The maximum amount of funds that MassDEP will allocate to a Grantee through this combined VW Electric and Refuse Truck Solicitation is \$500,000. The table below lists the funding limits that MassDEP has established for Refuse Truck projects under this solicitation. Grantees are required to fund the remainder of their project's purchase and installation costs. Grantees are prohibited from using applicable MOR-EV¹¹ or Diesel Emissions Reduction Act (DERA)¹² funding for any part of their cost share.

Refuse Truck Replacement

Technologies for Refuse Truck Replacement	Costs Covered	Allowed Funding %	
		Municipalities or under contract with municipality	
Replace w/new plug in hybrid electric (PHEV) or all-electric refuse truck	Equipment purchase, purchase and installation of electric charging or fuel cell infrastructure (see Charging Infrastructure table below for more info)	All-electric	PHEV
		60%	25%

¹¹ <https://mor-ev.org/>

¹² <https://www.mass.gov/how-to/apply-for-a-diesel-emissions-reduction-act-dera-electric-solicitation-grant>

3. Charging Infrastructure for VW and Refuse Truck projects

MassDEP will fund the electric charging infrastructure costs on the left side of the following table. MassDEP will not fund the costs on the right side.

Costs COVERED include:	Costs NOT COVERED include:
<ul style="list-style-type: none"> • A console wired into the electrical supply • A cable and connector to plug into the EV • Cable management strategy (e.g., coil, retractable, etc.) • Mounting, either pedestal or wall. Pedestal: hard-wired to a permanent pole or box. Wall: hard-wired to a wall and typically includes a mounting plate. • Separate payment module • Upgrading electric supply • Construction costs related to installation • Signage and pavement painting • Shipping/Freight 	<ul style="list-style-type: none"> • Land/parking space purchase or lease • Software subscription • Warranty • Taxes • Internet connection or cell signal • Planning or permitting for the project • Bollards, curbs, wheel stops, setbacks, bumper guards • Electricity consumption and demand charges • Preventative and corrective maintenance on Charging Infrastructure

4. Additionally, MassDEP will NOT COVER costs associated with the following:

Costs NOT COVERED include:
<ul style="list-style-type: none"> • Taxes; • Scrappage of the existing vehicles/engines/equipment; • Operation and maintenance costs of the new vehicles/engines/equipment; or • Fees of a third-party consultant, dealer or marine architect hired by Grantee to prepare plans for a repower (replacement) of an engine or to administer grant-funded activities, including submission of reports to MassDEP from Grantee.

Project Selection Criteria

Applicants must provide information in their online grant application that specifically addresses the criteria below, where applicable, listed in no particular order of importance. While the criteria provided in this section are the primary means of determining whether to select a proposed project, in certain instances MassDEP reserves the right to also consider other factors not included in these criteria when making its final selection of projects for funding.

- **Help the Commonwealth Reduce Air Pollution and Achieve GHG Emissions Reduction Targets in the Transportation Network** – MassDEP will consider applicants' estimated emissions reductions.
- **Promote Advanced Technologies in the Transportation Network** – MassDEP will consider whether the proposed project promotes advanced technologies in the transportation network in Massachusetts.
- **Serve Environmental Justice (EJ) Populations** – Massachusetts seeks projects that provide environmental benefits and reduce environmental burdens in EJ populations in the Commonwealth.
- **Utilize businesses certified with the Supplier Diversity Office** – MassDEP seeks to promote applicants, site hosts or vendors listed as a certified business. More details about eligibility can be found on <https://www.mass.gov/supplier-diversity-office>.
- **Promote Equitable Geographic Distribution Across the State** – The Commonwealth seeks to promote the equitable distribution of funding across the state. Geographic areas are defined as the four [MassDEP Regional Service Areas](#).¹³
- **Yield Additional Benefits** – In reviewing proposed projects, MassDEP may consider additional factors, including, but not limited to:
 - a. the project's implementation timeline, including the level of project implementation detail and feasibility
 - b. whether the project operates in a densely populated area
 - c. whether the applicant commits to contributing more than the required cost share
 - d. whether the project involves unique or replicable technologies or policies (e.g., the applicant would be willing to share acquisition and testing processes, written policies, data collected on the use of a new technology, etc.)
 - e. the project's societal co-benefits, such as the promotion and support of public health, economic health and diversity, and other desirable outcomes
 - f. the project's cost effectiveness for the NO_x and/or CO₂ reductions achieved (comparatively lower dollars spent per ton of NO_x/CO₂ reduced)

¹³ https://www.mass.gov/orgs/massachusetts-department-of-environmental-protection/locations?_page=1&page=1

General Procedures and Requirements of Grant Implementation

Technology Acquisition and Installation Process

- After Grantee receives an approval letter from MassDEP, Grantee and MassDEP must sign a *Commonwealth of Massachusetts - Standard Contract Form*. Other required documents include the *Commonwealth Terms and Conditions*, *Contractor Authorized Signatory Listing*, and *Form MA W-9 Request for Taxpayer Identification Number and Certification* (these forms will be provided upon selection, but are also posted at <https://www.mass.gov/lists/osd-forms#contract-forms-and-attachments-for-all-goods-and-services->). An End-User Agreement will be included as an attachment to the *Commonwealth of Massachusetts - Standard Contract Form*.
- Grantee must coordinate the delivery and, if applicable, installation of the technology directly with each vendor.
- Grantee must submit updates on the project implementation schedule when changes occur or upon request.
- Project should be completed within 18 months of MassDEP and Grantee signing the *Commonwealth of Massachusetts - Standard Contract Form*.
 - Although Grantees may apply for an extension, an extension is not guaranteed. Extension requests must be filed with MassDEP no later than 1 month prior to the end of the 18-month timeframe, along with documentation showing sufficient reason for the delay and a plan and timeline for completing the project.

Post-Acquisition and Installation Process

For all Grantees:

- Grantee must submit a *Payment Request Form* to MassDEP, listing when the equipment was received and installed, with itemized cost invoices and other information required by MassDEP.
- Grantees awarded funds for the purchase and deployment of multiple vehicles/engines/equipment may submit separate Payment Request Forms if the vehicles/engines/equipment are placed in service by Grantee at different times.
- Grantee must handle its cost-share directly with the vendor and submit a copy of the payment to MassDEP.
- Proof of scrappage of the existing vehicles/engines/equipment is required and may consist of:
 - Digital photos of the Vehicle Identification Number (VIN) tag, side profile of the vehicle, engine tag (showing serial number, engine family number, and engine model year), before and after pictures of the destroyed engine block, and cut frame rails or other cut structural components, as applicable.
 - A certificate of vehicle scrappage
 - Additional information regarding scrappage requirements will be included in the End-User Agreement.
- Grantee must operate the new engine or equipment for at least 3 consecutive years. Grantee must operate the new engine or equipment for at least half of the time inside Massachusetts.
- Grantee must collect data on its equipment, including data on actual use and documentation of operation inside Massachusetts, for the 3-year period it is required to operate the equipment. Grantee must submit such data upon request to MassDEP.

For VW Grantees:

- Scrappage must be complete for funds to be disbursed. Grantee must scrap the vehicle/engine equipment per Appendix D-2 of the VW Trust Agreement¹⁴ and provide MassDEP with proof upon completion.
- Once MassDEP submits all required documentation to the Trustee of the VW funds to request funds be disbursed, it can take up to 105 days for the funds to be released.
- MassDEP will direct the awarded grant amount either directly to Grantee or to Grantee's vendor, as specified by Grantee on the *Payment Request Form*.

For Refuse Truck Grantees:

- The state funds allocated to Refuse Truck Grantees are subject to fiscal year rules. Not following these rules can result in the loss of the grant funding: Scrappage should be complete for funds to be disbursed, unless payment must be requested sooner due to a Massachusetts State Fiscal Year (FY) deadline. The Massachusetts State FY is from July 1st to June 30th and Grantee must submit a Payment Request Form no later than July 15th following the end of any FY in which a vehicle/equipment was delivered and/or installation work occurred, even if the vehicle/equipment is not yet in service and/or the old equipment scrapped. Invoices for work completed in one FY cannot be reimbursed if received after July 15th in the following FY.

¹⁴ <https://www.vwcourtsettlement.com/wp-content/uploads/documents/DOJ/Approved%20Appendix%20D-2.pdf>

Emissions Calculations

Applicants must use the EPA's [Diesel Emissions Quantifier](#)¹⁵ (DEQ) to calculate emissions reductions for projects.

Step by Step Instructions:

1. Sign up for an account (if you do not have one).
2. Click on the blue *Create New Project* button.
 - On *Create New Project* page, name your project.
3. Total Project Costs: Users should enter data on equipment and installation costs associated with a project.
4. Select Save Project.
5. On the new page that opens (*Update Project Information*) click on the blue *Add a Vehicle or Engine Group* bar.
6. Select your equipment type from the list under the bar.
7. Under *Onroad Vehicle*, a "long haul" combination or single unit makes trips of over 200 miles; a "short haul" makes trips of 200 miles or less.
8. Fill in the fields on the new page that opens (*New Vehicle Group*), using actual data for the most recent year you have.
 - Quantity: The quantity must be 1 since you must run the DEQ for each piece of equipment separately.
 - If you need to use a default for any data point, select Get Default Value.
9. Click on *Save Group* at the bottom of the page (the DEQ uses the term "Group" even when the quantity is one).
10. On the next page (*Group Name:*) click on the blue bar *Add an Upgrade* and select appropriate upgrade.
11. Fill out the fields on the new page that opens (*Add an Upgrade*).
 - Annual Diesel Gallons Reduced (per engine):
For electric replacement projects the gallons reduced will be the same as the gallons used by the old equipment.
12. At the bottom of the page, click the blue *Save Upgrade* button. You are now done entering data.
13. On the *Group Name* page, scroll all the way down to the blue *Quantify Project Emissions* button, and click it to see the *Emission Results* page.
14. On the *Emissions Results* page, scroll down to the heading *Downloading Spreadsheets*, and click on the *Spreadsheet* link to download the Excel spreadsheet of your project.
15. The spreadsheet is a required document to be uploaded, with all the information as downloaded.
16. If you need help you can contact the DEQ Helpline: DEQhelp@epa.gov.

¹⁵ <https://cfpub.epa.gov/quantifier/index.cfm?action=main.home>