



Massachusetts DERA Electric Solicitation Application Guidance and Grant Requirements

Program Background

The Massachusetts Department of Environmental Protection (MassDEP) is issuing a grant opportunity for diesel emissions reduction projects under the U.S. Environmental Protection Agency's (EPA) Diesel Emissions Reduction Act (DERA) program. MassDEP's implementation of this program is designed to accelerate the retirement of less efficient, and more polluting vehicles, engines, and equipment, and replace them with zero emission vehicles and equipment. Diesel emissions can result in serious health conditions like asthma and respiratory illnesses and exacerbate global climate change, and often disproportionately affect environmental justice communities that already are impacted by environmental hazards. Replacement with full electric vehicles and equipment will maximize emissions reductions and will best help the State reach its climate action goals.

MassDEP is committed to advancing equity, diversity, and environmental justice (EJ)¹ 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.

MassDEP has approximately \$1.88 million available for this new DERA Electric Solicitation under the [2021 Diesel Emissions Reduction Act \(DERA\) State Grants Program Guide](#) (2021 DERA Guide) rules.

Eligible diesel vehicles, engines and equipment include, but are not limited to, the following diesel emission source types, as listed in Table 2 of the 2021 DERA Guide:

Table 2: Eligible Diesel Vehicles, Engines and Equipment

School Buses	Includes diesel powered school buses of Type A, B, C and D. To be eligible as a school bus a vehicle should meet the definition of a school bus as defined by the National Highway Transportation Safety Administration. This definition includes but is not limited to: 1) A bus that is used for purposes that included carrying students to and from school or related events on a regular basis; 2) Be identified with the words "School Bus"; and 3) Be painted National School Bus Glossy Yellow.
Transit Buses	Includes Class 5+ diesel powered medium-duty and heavy-duty transit buses.
Medium-duty or heavy-duty trucks	Includes diesel powered medium-duty and heavy-duty highway vehicles ² with gross vehicle weight rating (GVWR) as defined below: Class 5 (16,001-19,500 lbs GVWR); Class 6 (19,501-26,000 lbs GVWR); Class 7 (26,001-33,000 lbs GVWR); Class 8 (33,001 lbs GVWR and over)
Marine Engines	Includes diesel powered Category 1, 2, and 3 marine engines and vessels.

¹ Environmental Justice (EJ) is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. EJ is the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits.

² For drayage trucks, see 2021 DERA Guide section VIII.B.1.

2022 DERA Electric Solicitation

Locomotives	Includes diesel powered line-haul, passenger, and switch engines and locomotives.
Nonroad engines, equipment, or vehicles	Includes diesel powered engines, equipment and vehicles used in construction, handling of cargo (including at ports and airports), agriculture, mining, or energy production (including stationary generators and pumps), and transport refrigeration units (TRUs). ³

The eligible mitigation technologies that can be applied to the above vehicles, engines, and equipment include:

1. Verified Idle Reduction Technologies
2. Engine Replacements with Zero-tailpipe Emission Power Source
3. Vehicle and Equipment Replacements with Zero-tailpipe Emission Power Source

Who Can Apply

The 2022 DERA Electric Solicitation is open to any entity, public or private, with an eligible vehicle, engine, or equipment to replace. For all applicants, equipment eligibility is based on criteria listed in the 2021 DERA Guide as well as proof of operation at least half the time inside Massachusetts.

For government entities, state contracts that may have eligible equipment include:

[VEH110](#) - Light and Medium-Duty Vehicles

[VEH111](#) - Heavy-Duty Vehicles, Road Maintenance and Construction Equipment

[VEH102](#) - Advanced Vehicle Technology Equipment, Supplies and Services [includes Electric Vehicle Supply Equipment (EVSE) and electric transportation refrigeration units (eTRUs)]

Contract User Guides for all state contracts can be found at <https://www.mass.gov/service-details/vehicles-transportation-and-road-maintenance>.

³ For TRUs, see 2021 DERA Guide section VIII.B.2.

2022 DERA Electric Solicitation

How to Apply

This is a competitive application based on selection criteria. Applications must be submitted online as detailed below. To be considered for funding, applications must be received by **5:00 p.m., August 24, 2022**. Each piece of equipment will be evaluated independently. If you have questions about this application, please contact Cayla Paulding at cayla.paulding@mass.gov.

There is a mandatory cost-share required that each applicant must pay from non-federal funds, which differs by equipment category; see the table on pg. 25 of the [2021 DERA Guide](#).

Project Application - Applicants must complete the online form at:

https://massgov.formstack.com/forms/dera_project_application_form 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 (see Emissions Calculations section on pg. 11 of this document)

Document Upload – 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 believed to support the application.

1. MA W9 Form
2. Itemized cost quotes
3. Where 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. Diesel Emissions Quantifier output in excel format or alternative emissions accounting methods if applicable

The maximum size limit for uploaded materials is 25 megabytes total, including all supplemental documents. If you need to submit more documentation, please email it to cayla.paulding@mass.gov after submitting your application, referencing your application contact information.

2022 DERA Electric Solicitation

More Information

Eligibility tables are provided below. Applicants should refer to the [2021 DERA Guide](#) for more details. Eligible diesel vehicles, engines and equipment are listed as Table 2 on page 6 of the 2021 DERA Guide. Eligible electric emissions reduction solutions follow on the next page of the 2021 DERA Guide.

Funding restrictions exist; see section IX of the 2021 DERA Guide beginning on page 22. In addition, the engine, vehicle, or equipment being replaced must be scrapped or rendered permanently disabled; see section IX.I.4. Tables 3-6 in the 2021 DERA Guide are excerpted below, limited to the eligible existing equipment by year and/or tier that must be replaced with zero emission vehicles and equipment. Table 7 lists the funding limits and mandatory cost-shares required of grantees.

Eligible costs for battery electric powered vehicle, equipment and engine replacement projects can include the purchase and installation of one charging unit per vehicle, including the unit and charging cable, mount and/or pedestal. These costs are subject to the mandatory cost shares outlined in Table 7. Ineligible costs include power distribution to the pedestal, electrical panels and their installation, upgrades to existing electrical panels or electrical service, transformers and their installation, wiring/conduit and its installation, electricity, operation and maintenance, stationary energy storage systems that power the equipment (e.g. batteries) and their installation, and on-site power generation systems that power the equipment (e.g., solar and wind power generation equipment) and their installation.

The existing vehicle, engine, or equipment must have at least three years of remaining life at the time of application. See Section VIII.F. Ownership, Usage and Remaining Life Requirements, starting on page 17 of the 2021 DERA Guide.

Costs based on quotes received must be entered into the online form, including the percentage and amount of funding sought, not to exceed the maximum allowed under the 2021 DERA Guide.

MassDEP may contact the applicant for clarification or supplemental information. Applicants will have 15 calendar days to respond to any such request; if the requested information is not received within that time, MassDEP may not consider the grant application. MassDEP will evaluate and select projects based on a complete grant application and any requested clarifying or supplemental information subsequently provided.

The submission of an application does not constitute an award or guarantee funding. **Vehicles and equipment must not be ordered until the Grantee receives an award letter from MassDEP.** MassDEP reserves the right to grant only a portion of the maximum allowable funds per project, and to not award grant funding for the entire \$1.88 million offered.

2022 DERA Electric Solicitation

Eligibility and Funding Limits Charts

Use the charts below to determine whether your equipment is eligible for funding, and how much funding it is eligible for, under the 2021 DERA Guide and this 2022 DERA Electric Solicitation. Table numbers are as listed in the 2021 DERA Guide, with the excerpts below limited to the eligible existing equipment by year and/or tier that under this Electric Solicitation must be replaced with zero emission vehicles and equipment with no exhaust emissions. Additional eligibility restrictions exist as noted.

Table 3: Medium and Heavy-Duty Truck, Transit Bus, and School Bus Project Eligibility

Current Engine Model Year (EMY)	Vehicle or Engine Replacement with Zero Emission*, EMY 2019+
older - 2006	Yes
2007 - 2009	Yes
2010 - newer	Yes

*Eligible fuel cell projects are limited to hydrogen fuel cell engine replacements for eligible urban transit buses, shuttle buses and drayage trucks.

Table 4: Nonroad Engine Project Eligibility

Current Engine Tier	Vehicle/Engine/Equipment Replacement with Zero Emission*, EMY 2019+
Unregulated - Tier 2	Yes
Tier 3	Yes
Tier 4	Yes

*Eligible fuel cell projects are limited to hydrogen fuel cell equipment replacements for eligible terminal tractors/yard hostlers, stationary generators, and forklifts. Fuel cell engine replacement is not eligible.

Table 5: Marine Engine Project Eligibility

Engine Category	Engine Horsepower	Current Engine Tier	Engine & Vessel Replacement with Zero Emission
C1, C2	All	Unregulated - Tier 3	Yes
C1, C2	≥804	Tier 4	No
C3	All	Unregulated - Tier 3	No

*Fuel cell engine and vessel replacements are not eligible. Over 800 HP, Tier 3 engines are not eligible for full vessel replacement.

Table 6: Locomotive Engine Project Eligibility

Current Locomotive Tier	Engine & Locomotive Replacement with Zero Emission*
Unregulated - Tier 2+	Yes
Tier 3	Yes
Tier 4	No

*Fuel cell engine and locomotive replacements are not eligible.

2022 DERA Electric Solicitation

Table 7. DERA Funding Limits and Mandatory Cost-Share Requirements

Eligible Technologies	DERA Funding Limits	Minimum Mandatory Cost-Share (Fleet Owner Contribution)
Vehicle or Equipment Replacement with Zero-tailpipe Emission Power Source (excluding drayage trucks)	45%	55%
Drayage Trucks with Zero-tailpipe Emission Power Source	50%	50%
Engine Replacement with Zero-tailpipe Emission Power Source	60%	40%
EPA Verified Marine Shore Connection Systems*	25%	75%
EPA Verified Locomotive Idle Reduction Technologies*	40%	60%
EPA Verified Electrified Parking Space Technologies*	30%	70%

*Eligible idle reduction technologies must be on EPA's SmartWay Verified Technologies list (www.epa.gov/verified-diesel-tech/smartway-technology) at the time of acquisition.

2022 DERA Electric Solicitation

Project Selection Criteria

Applicants must answer the questions in the online grant application that specifically address the criteria below, where applicable, listed in no particular order of importance, except that projects providing a credible timeline for completion by September 30, 2023 may be given higher priority. 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. All Projects for the 2022 DERA Electric Solicitation must replace existing vehicles, engines, or equipment with new, all-electric (including hydrogen fuel cell) counterparts.

To ensure the best possible consideration of your application, applicants must answer questions about how your project will:

- **Help the Commonwealth Reduce Air Pollution and Achieve GHG Emissions Reduction Targets in the Transportation Network** – MassDEP will consider projects' estimated emissions reductions (see further details in Emissions Calculations section below).
- **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** – MassDEP seeks projects that provide environmental benefits and reduce environmental burdens in EJ areas in the Commonwealth.
- **Promote Equitable Geographic Distribution Across the State** – MassDEP seeks to promote the equitable distribution of funding across the state. Geographic areas are defined as the four [MassDEP Regional Service Areas](#).⁴
- **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>.
- **Be completed by September 30, 2023.**
- **Yield Additional Benefits** – In reviewing proposed projects, MassDEP may consider additional factors, including, but not limited to:
 - The project's implementation timeline, including the level of project implementation detail and feasibility
 - Whether the project operates in a densely populated area
 - Whether the applicant commits to contributing more than the required cost share
 - 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.)

⁴ <https://www.mass.gov/service-details/massdep-regional-offices-by-community>

2022 DERA Electric Solicitation

- The project's societal co-benefits, such as the promotion and support of public health, economic health and diversity, and other desirable outcomes
- The project's cost effectiveness for nitrogen oxides, hydrocarbons, carbon monoxide, particulate matter (PM_{2.5}) and/or carbon dioxide reductions achieved (comparatively lower dollars spent per ton of emissions reduced, as calculated by the DEQ; see pages 10-11 of this document)

2022 DERA Electric Solicitation

General Procedures and Requirements of Grant Implementation

Equipment Acquisition and Installation Process

- MassDEP will email Grantees award letters, a *Commonwealth of Massachusetts - Standard Contract Form*, the *Commonwealth Terms and Conditions*, *Contractor Authorized Signatory Listing*, (these forms are posted at <https://www.mass.gov/lists/osd-forms#contract-forms-and-attachments-for-all-goods-and-services->) and *electronic funds transfer (EFT) form* including voided check (<https://www.mass.gov/files/documents/2016/08/ti/authorization-for-electronic-funds-payment-eft.pdf>). 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 equipment directly with the vendor.
- Grantee must submit updates to MassDEP regarding the project implementation schedule every three months or more frequently if requested.
- Project should be completed no later than 9/30/2023.
 - Although Grantee may apply for an extension, an extension is not guaranteed. Extension requests must be filed with MassDEP no later than 1 month prior to 9/30/2023, along with an explanation for the delay and a plan and timeline for completing the project.

Post-Acquisition and Installation Process

- Grantee must submit a *Payment Request Form* to MassDEP confirming that the vehicle and/or equipment was received and, if applicable, installed, with detailed cost invoices and other required information.
- Payment will be made as a reimbursement directly to the Grantee. It is the responsibility of government Grantees to ensure compliance with all laws, regulations, and other requirements applicable to the acquisition of the equipment.
- Grantee must scrap the vehicle/engine/equipment within 90 days of it being replaced and provide proof to MassDEP upon completion per the requirements in the 2021 DERA Guide. Required proof consists 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.

2022 DERA Electric Solicitation

- After completion of the acquisition or installation of the vehicle/equipment, Grantee agrees to allow MassDEP, or MassDEP's designated representative, access to the location of the vehicle/equipment during normal business hours and, in the case of vehicles, at a location mutually convenient for Grantee and MassDEP so that MassDEP can verify the acquisition. Such access shall be provided within a reasonable time after request by MassDEP, not to exceed 3 weeks.
- In general, 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 the Payment Request Form no later than July 15th following the end of the FY in which the 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. Grantees awarded funds for the purchase and deployment of multiple vehicles/equipment may submit separate Payment Request Forms if the vehicles/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.
- Grantee must operate the new vehicle or equipment for at least 3 consecutive years.
- Grantee must operate the new vehicle or equipment for at least half of the time inside Massachusetts.
- Grantee must collect data on its vehicle or equipment, including data on actual use and documentation of operation inside Massachusetts, for the 3-year period it is required to operate the vehicle or equipment.
 - Grantee must submit such data to MassDEP upon request.

2022 DERA Electric Solicitation

Emissions Calculations

Applicants must use the EPA's [Diesel Emissions Quantifier](#)⁵ (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.
3. On *Create New Project* page, name your project and select your project's *Type*.
 - Engines: **This field only comes up if you select Marine under the Type field.** The DEQ allows applicants for marine engine upgrades to enter up to 5 engines at a time, however, since each engine will be evaluated individually, you must select a quantity of 1, and run the DEQ separately for each different propulsion or auxiliary engine for which you are seeking funding.
4. Total Project Costs: Users should enter data on equipment and installation costs associated with a project.
5. Select Save Project.
6. On the new page that opens (*Update Project Information*) click on the blue *Add a Vehicle or Engine Group* bar.
 - If you are applying for a marine vessel engine, *Add an Engine Group* may not be visible on the bar but will work when clicked.
7. Select your equipment type from the list under the bar.
8. 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.
9. 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.
 - *Remaining Life of Baseline*: Always click on *Get Estimated Remaining Life* to the right of the box.
10. Click on *Save Group* at the bottom of the page (the DEQ uses the term "Group" even when the quantity is one).
11. On the next page (*Group Name*): click on the blue bar *Add an Upgrade*.
 - Click on the most appropriate of the choices that appear under *Replacements*. You will be taken to a new page.
12. Fill out the fields on the new page that opens (*Add an Upgrade*).
 - *Annual Diesel Gallons Reduced* (per engine):
Since this an electric only solicitation, the gallons reduced will be the same as the gallons used by the old equipment.
13. At the bottom of the page, click the blue *Save Upgrade* button. You are now done entering data.
14. 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.
15. 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.

⁵ <https://cfpub.epa.gov/quantifier/index.cfm?action=main.home>

2022 DERA Electric Solicitation

16. Copy and paste the data from the spreadsheet into the corresponding fields in the online form. *Note – only the annual and lifetime results are required in the form, but the spreadsheet is a required document to be uploaded, with all the information as downloaded.
17. If you need help you can contact the DEQ Helpline: DEQhelp@epa.gov.