



Funding Opportunity Announcement

FY24 Medium-Duty and Heavy-Duty Zero-Emission Vehicle Grant Program

Note: Updated March 19th 2024, to make several formatting corrections and update award eligibility for emergency vehicles. Deadline extended for all applicants to 5:00 P.M. EDT, Monday, April 22nd, 2024.

Program Description:

- The State Fiscal Year 2024 (FY24) Medium-Duty and Heavy-Duty Zero Emission Vehicle Grant Program (MHD ZEV) is established through [§9–2011 of Md. Code, State Government article](#). The Program provides financial assistance for the purchase of qualified, newly manufactured medium-duty or heavy-duty zero-emission fleet vehicles, as well as qualified zero-emission heavy equipment property, for commercial or industrial use.

Type of Grant Program:

- Competitive statewide

Program Budget:

- The program has an anticipated budget of up to \$6,500,000 for FY24. However, the actual amount awarded may vary, depending on the quantity and quality of applications received and MEA's available resources within the fiscal year. Of the \$6.5M budget:
 - \$5.75M is available for eligible on-road vehicles under Area of Interest 1 (AOI 1); and,
 - \$750,000 is available for eligible off-road heavy equipment property under Area of Interest 2 (AOI 2).
- The source of the program funding is the Strategic Energy Investment Fund (SEIF).
- AOI 1 (i.e., on-road vehicles) and AOI 2 (i.e., off-road heavy equipment property) applications will be evaluated separately. If insufficient eligible applications are received, MEA at its discretion may shift funds between AOIs based upon demand, application quality, and funding availability.

Application Deadline:

- The program application period closes on **Monday, April 22nd, 2024**.
 - Applications must be received at MEA by **5:00 PM EDT, April 22nd, 2024**. Confirmation will be sent to each applicant verifying receipt of application from transportation.mea@maryland.gov within two business days of receipt. If an applicant does not receive a confirmation of receipt within this time frame, it is the applicant's responsibility to contact MEA to confirm that the application was successfully transmitted from the applicant's email system to MEA.

Eligible Applicants:

- In accordance with §9–2011, a person or a unit of local government may apply for a grant under the Program. “Person” means an individual, receiver, trustee, guardian, personal representative, fiduciary, or representative of any kind and any partnership, firm, association, corporation, or other entity.¹
- Ineligible applicants include but are not limited to: state and federal agencies and individuals seeking funding for vehicles used for individual or personal activities.
- To be eligible, an applicant must have at least three (3) vehicles in their existing fleet, or in their fleet after purchase of the ZEV vehicles being submitted for consideration under the MHD ZEV Program. These vehicles must be domiciled at a non-residential place of business.
- Applications may only include vehicles directly owned or leased by the applicant.
- Applicants must conform with the program requirements and definitions outlined in [§9–2011 of Md. Code, State Government article](#).
- Applicants must be in good standing with the Maryland State Department of Assessments and Taxation.
- Vehicles being purchased for resale are ineligible for an award under this Program.
- Applicants are ineligible for program funding for vehicles that have previously been awarded or are expecting to be awarded funding through the State’s VW Environmental Mitigation Trust Fund program(s) or other State funding programs.
- If an applicant is applying to a federal program or non-State program and receives an award incentivizing a vehicle for which the applicant also applies and receives a MHD ZEV award, the amount of the MHD ZEV award shall not exceed the applicant’s contribution to the project.
- MEA strongly encourages applications that will benefit underserved or overburdened communities, as defined in [§1-701 of Maryland Code, Environment article](#).

Eligible Projects and Requirements:

- This Grant Program is only available for vehicles and equipment being deployed for commercial or industrial use.
- To be eligible, a vehicle must be a Class 3 through 8 on-road battery electric vehicle (BEV) or hydrogen fuel cell electric vehicle (FCEV), or an off-road BEV or FCEV.
- All vehicles (on-road and off-road) shall be rated at more than 10,000 pounds gross vehicle weight to be eligible in FY24.
- Personal passenger, non-fleet vehicles, **parallel** plug-in hybrid electric vehicles, neighborhood electric vehicles² (NEVs), and low-speed vehicles³ (LSVs) are ineligible for program funding.
- **For emergency vehicles associated with life safety activities only, a Range Extended Electric Vehicle (REEV) is eligible. A Range Extended Electric Vehicle has an all-electric drivetrain and equipment with a diesel energy backup system to ensure delivery of emergency services. The electric motor drives the wheels almost all of the time, but the vehicle can switch to work like a**

¹ §1–101 of Md. Code, State Government article.

² The U.S. Department of Energy defines a NEV as “any four-wheel electric vehicle capable of achieving a top speed between 20 and 25 miles per hour (mph) and complies with the federal equipment and safety standards in Title 49 of the [U.S. Code of Federal Regulations](#), section 571.500.” Source: <https://afdc.energy.gov/laws/5768>.

³ A low-speed vehicle is defined by the U.S. Department of Energy as a “four-wheeled motor vehicle, other than an all-terrain vehicle, that is capable of reaching speeds of at least 20 miles per hour (mph) but not greater than 25 mph, has a gross vehicle weight rating of less than 3,000 pounds, and meets the safety standards in Title 49 of the U.S. Code of Federal Regulations, section 571.500.” Source: <https://afdc.energy.gov/laws/5954#:~:text=A%20low%2Dspeed%20vehicle%20is,49%20of%20the%20U.S.%20Code>

parallel hybrid at highway speeds when the battery is depleted.

- Zero-emission heavy equipment property⁴ means construction, earthmoving, or industrial heavy equipment (including any attachment for the equipment) that must be mobile and does not use an internal combustion engine.
 - Eligible zero-emission heavy equipment property include:
 1. a self-propelled vehicle that is not designed to be driven on the highway; and,
 2. industrial electrical generation equipment, industrial lift equipment, industrial material handling equipment, or other similar industrial equipment.
- Vehicles must be purchased new (i.e., retrofits are NOT eligible) and cannot be funded with this MHD grant if they have already been awarded funding through another state grant for the same vehicles.
- Repowered vehicles are not eligible for program funding. Repowered vehicles are used vehicles that have had the existing diesel/gasoline engine replaced with a new engine, motor, drivetrain, battery, and/or other alternative fuel vehicle drive and fuel storage component.
- **Any vehicle or equipment that was ordered, purchased, delivered, or for which a deposit was paid before July 1, 2023, is not eligible for a grant.**⁵
 - Any applicant who starts a project and incurs costs before executing a grant agreement with MEA under this Program does so at its own risk.
- Vehicles must be registered in Maryland to the applicant.
- Vehicles shall be domiciled and primarily operated within the State for no less than three (3) years from the vehicle(s) delivery (dates).
 - Should a grantee decide to redeploy out of state, sell, or otherwise take out of service a vehicle funded through the Program before the end of the three year period, the grantee may be required to repay the grant.
- If the vehicle is being hosted at a site owned by another entity other than the applicant to this MHD ZEV program, MEA will require a signed letter of commitment from the site host for the application of grant funds. The signature of the site host will also be required in the Grant Agreement (two signatures in total, one from applicant and one from site host).
- Vehicles are not required to replace an existing conventional vehicle in the applicant's fleet, nor is there any scrappage requirement. However, vehicles associated with the replacement or retirement of existing gas/diesel vehicles will be viewed more favorably during the application review process.
- Projects must be completed, and reporting and reimbursement materials submitted to MEA within 24 months of the grant agreement execution date.
- Medium-duty or heavy-duty zero-emission vehicle supply equipment is not eligible for the FY24 MDH ZEV Program.

Evaluation Criteria:

- MEA will evaluate MHD ZEV applications on the following criteria:
 - Minimum criterion for participation in the MHD ZEV Program: Qualified medium-duty or heavy-duty zero-emission vehicles and zero-emission heavy equipment property shall be domiciled in Maryland and operated or used primarily within the State.
 - The estimated amount of petroleum fuel or other fossil fuel to be displaced. This will be calculated by MEA using the [AFLEET tool](#) and the anticipated annual mileage to estimate the difference in fuel usage between purchasing a diesel, gasoline, or other fossil fuel vehicle and purchasing a new ZEV vehicle.
 - Whether the purchased ZEV will replace an existing petroleum-powered vehicle within the fleet.

⁴ See [§9-2011\(a\)\(7\)](#) of Maryland Code, State Government article.

⁵ July 1, 2023 is the first day of fiscal year 2024.

- Applications involving a qualified ZEV replacing an existing petroleum-powered vehicle and the existing petroleum-powered vehicle is then retired will be evaluated more favorably than applications involving the purchase of a new ZEV where an existing petroleum-powered vehicle is not retired.
 - Cost Effectiveness (estimated GHG reduction per vehicle per year per MHD ZEV eligible incentive). The GHG reduction estimate will be determined using the [AFLEET tool](#).
 - Level of fleet commitment. Cohesive plan for incorporating ZEVs into the fleet, especially for applicants who are new to ZEVs (e.g., charging/fueling plan, maintenance, etc.).
 - MEA will also give preference to qualified medium-duty or heavy-duty zero-emission vehicles that are to be owned or operated by an entity engaged in business activity that impacts public health, the environment, or infrastructure in an overburdened or underserved community⁶, as defined in § 1-701 of Md. Code, Environment article. Instructions on how to identify overburdened and underserved communities can be found in the Excel workbook application, on the Project Narrative tab question #10.
 - For AOI 1 only, applications that incorporate additional vehicle road safety features will be evaluated more favorably than vehicles without additional safety features. Additional safety features may include: automatic emergency braking, advanced driver assistance systems like lane assist and blind spot monitoring, intelligent speed adapters, and strong rear and side underride guards.
- MEA may request supplemental information from an applicant to assist with application evaluation.

Review Process

- The MEA Clean Transportation Program Manager will assemble a review team of at least three (3) qualified energy professionals. Individuals from outside MEA may be included at the Clean Transportation Program Manager's discretion. All team members will review each application using the program evaluation criteria outlined in this FOA.
- Projects will then be ranked from highest to lowest by the review team as a group, based on the evaluation criteria. The review team will also determine if any applications do not meet the eligibility requirements for the Program.
- The Program Manager will summarize the recommendations of the award team to the MEA Energy Programs Division Director or the designee of the Energy Programs Division Director, incorporating input from the Review Team, based on the funding available. Award recommendations are not finalized until approved by the MEA Agency Director, or the MEA Agency Director's authorized designee.
- The review team may recommend additional projects (in order of ranking) for funding if additional funding becomes available before the end of the fiscal year.

Award Formula:

- The grant provided by MEA for applications selected for award will be up to 75% of the incremental cost of the qualified medium-duty or heavy-duty zero-emission vehicle, or zero-emission heavy equipment property.
 - A qualified medium-duty or heavy-duty zero-emission vehicle⁷ means a motor vehicle that is rated at more than 10,000 pounds gross vehicle weight and is powered by electricity stored in a battery or produced by a hydrogen fuel cell.
 - Zero-emission heavy equipment property⁸ means construction, earthmoving, or industrial

⁶ Pursuant to §9-2011(b)(3) of Md. Code, State Government article.

⁷ Pursuant to §9-2011(a)(5) of Md. Code, State Government article.

⁸ Pursuant to §9-2011(a)(7) of Md. Code, State Government article.

equipment, including any attachment for the equipment that is mobile, and does not use an internal combustion engine. Zero-emission heavy equipment property includes a self-propelled vehicle that is not designed to be driven on a highway, and industrial electrical generation equipment, industrial lift equipment, industrial material handling equipment, or other similar equipment.

- For the MDH ZEV program in FY24, zero-emission heavy equipment property must be rated at more than 10,000 pounds.

For AOI 1 (On-Road Medium- and Heavy-Duty ZEV Vehicles)

- For AOI 1, grants will be awarded based on up to 75% of the incremental costs between the qualified ZEV and the comparable petroleum-fueled vehicle using the values outlined in the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) tool.

Formula for calculating the grant by vehicle type using AFLEET

Maximum Grant Award = (ZEV vehicle price in AFLEET - Base vehicle price in AFLEET (e.g., diesel)) *0.75

Example for an electric school bus replacement using AFLEET values (where the base vehicle is diesel)

Maximum Grant Award = (\$300,000 - \$100,000) *0.75 = \$200,000 * 0.75

Maximum Grant Award = \$150,000 (electric school bus)

- Table 1 below shows the calculated grant amounts, by vehicle type, using the purchase prices included in the AFLEET Tool for diesel to electric conversions, as well as diesel to hydrogen vehicle conversions.

Table 1: FY24 Medium-Heavy Duty Grant Program Incentives for Zero Emission On-Road Vehicles (Diesel to Electric and Diesel to Hydrogen)

Zero Emission Type	Vehicle Type	ZEV Costs	Diesel Costs	Incremental Cost (ZEV minus diesel vehicle costs)	% of Incremental Cost Eligible for Grant Request	Maximum Up to Grant Award (per new vehicle)
Battery Electric (BEV)	Single Unit Short-Haul Truck	\$150,000	\$70,000	\$80,000	Up to 75%	\$60,000
	Single Unit Long-Haul Truck	\$185,000	\$75,000	\$110,000	Up to 75%	\$82,500
	School Bus	\$300,000	\$100,000	\$200,000	Up to 75%	\$150,000
	Refuse Truck	\$500,000	\$300,000	\$200,000	Up to 75%	\$150,000
	Combination Short-Haul Truck	\$480,000	\$130,000	\$350,000	Up to 75%	\$262,500
	Transit Bus	\$900,000	\$500,000	\$400,000	Up to 75%	\$300,000

	Combination Long-Haul Truck	\$850,000	\$150,000	\$700,000	Up to 75%	\$525,000
Hydrogen (FCEV)	Combination Short-Haul Truck	\$360,000	\$130,000	\$230,000	Up to 75%	\$172,500
	Combination Long-Haul Truck	\$400,000	\$150,000	\$250,000	Up to 75%	\$187,500
	Transit Bus	\$1,125,000	\$500,000	\$625,000	Up to 75%	\$468,750

Projects involving fossil fuel vehicles other than diesel (e.g., liquid propane, compressed natural gas (CNG), liquified natural gas (LNG)) to electric, as well as fossil fuel vehicles other than diesel to hydrogen, are also eligible for a possible award. The maximum allowable grant, if the proposed project is selected for award, will be calculated using the incremental cost for these vehicles, based on the estimated vehicle prices from AFLEET, using the formula outlined in this FOA (i.e., (ZEV vehicle cost - fossil fuel vehicle cost)*0.75). To confirm the maximum possible grant amount by vehicle type, please reach out to the MEA Transportation Program Manager listed below.

For AOI 1, the maximum amount of FY24 MHD ZEV grant funding will not exceed \$1.5 million per applicant.

For AOI 2 (Zero-Emission Heavy Equipment Property)

- Zero-emission heavy equipment property is construction, earthmoving, or industrial heavy equipment, including any attachment for the equipment, that is mobile and does not use an internal combustion engine. Zero-emission heavy equipment property includes self-propelled vehicles that are not designed to be driven on a highway, and includes industrial electrical generation equipment, industrial lift equipment, industrial material handling equipment.
- For each heavy equipment property, an applicant to AOI 2 will be eligible to receive up to 75% of the incremental cost, or difference in price, between comparable conventional heavy equipment property and zero-emission heavy equipment property that is directly attributable to the functional features of the equipment.
- An applicant to AOI 2 is required to provide third-party cost information for the conventional fossil-fuel powered version of the heavy equipment property, as well as a third-party price estimate for the comparable zero-emission heavy equipment property.
 - To comply with the statutory requirements of the Program, MEA may exclude any costs deemed not directly attributable to the functional features of the equipment from the incremental cost calculation.

For AOI 2, the maximum amount of FY24 MHD ZEV grant funding will not exceed \$375,000 per applicant.

Partial Awards:

- Partial awards are possible under the Program. If insufficient funds are available to fully fund a project (e.g., instances of exceptional demand, limited budget resources etc.), an applicant may be offered a proportionally reduced, partial award with the remaining budgeted funding. If the applicant accepts, then the project will be funded at a level that is less than 75% of the incremental costs between the conventional vehicle and the ZEV.

- If the applicant does not accept a partial award, an award will be offered to the next approved project in rank order until all funding has been expended or all remaining projects have rejected the offer.

Required Application Documents:

- The required application forms (in an Excel workbook) can be obtained on the Program Website at <https://energy.maryland.gov/transportation/Pages/MediumandHeavyDutyGrant.aspx>.
- A complete application package consists of a complete, signed application (i.e., the Excel workbook with all tabs completed) and the supporting documentation outlined below.
- Application Package
 - A completed, signed application form (Excel workbook). After reviewing the tab entitled “Instructions”, the applicant must complete the following additional workbook tabs:
 - Project Narrative
 - General Information
 - Zero Emission Vehicle Summary Table
 - Attachment Checklist
 - Applicant Signature
 - Attachments (as applicable)
 - Vendor documentation of technical specifications
 - Vehicle Lease Documentation
 - Letter of commitment for site host, if applicable
 - A complete and signed IRS Form W-9⁹ (Request for Taxpayer Identification Number and Certification) for the applicant
 - **If the federal tax identification number is a social security number, do NOT submit this information via non-encrypted email. Contact MEA for alternative submission instructions.**

Submission Instructions:

- MEA encourages the use of electronic communication, including applications, to streamline processing and reduce environmental impacts. If you choose to “opt out” of electronic communications for this program, please contact MEA no later than five (5) days prior to the application deadline to work on an alternative method to apply.
- **Applications should be submitted electronically to MEA via email to: transportation.mea@maryland.gov.**
- Email subject line should follow the naming convention: "*Fleet Name- MEA FY24 MHD ZEV Application Package*".
- Application form should be saved as an Excel file using the following naming convention: "*Fleet Name- MEA FY24 MHD ZEV Application Form*". Please do not re-save and submit the file as a PDF.
- Attach supporting documents as separate files. Do not combine each piece of supporting documentation into one file attachment.

Grant Program General Provisions:

- MEA grant programs are covered by general grant provisions that apply to all energy programs. A copy of the General Provisions document is available on MEA’s website at <https://energy.maryland.gov/SiteAssets/Pages/all-incentives/General%20Provisions%20v3%202.11.22.pdf>; this document will be incorporated into all FY24 grant agreements issued by MEA.

⁹ A blank copy of an IRS Form W9 can be downloaded from the IRS website at: <https://www.irs.gov/forms-pubs/about-form-w-9>.

Grant Process:

- The Applicant must be willing and able to enter into a grant agreement with MEA if selected for an award.
- The name and federal tax identification number on the IRS W9 form must match the name of the grantee on the grant agreement. Upon execution of the FY24 grant agreement, MEA is unable to change the federal tax identification number of the grantee.
- Grants are paid in arrears.
- Participation in MEA grant programs is voluntary. If selected for award and to ensure the secure transmission of grant funds, grantee recipients of MEA funding are generally required to receive electronic payments from the State of Maryland. Electronic payments will be set up through the State of Maryland's Comptroller's Office.

Reporting Requirements:

- Prior to vehicle delivery, all grantees shall provide progress updates as requested by MEA.
- Once vehicle(s) have been delivered, all grantees will be required to submit quarterly operation reports for three years beginning the first quarter after project completion/vehicle delivery. Data requested includes but is not limited to vehicle miles traveled, energy use, project bids, VINs, license plate numbers, and any other information deemed necessary by the state.

Relevant Programs/Resources:

- For general information on additional incentives available for ZEVs and supporting fueling/charging infrastructure, please consult the [US DOE Alternative Fuels Data Center \(AFDC\) website](#).

Program Changes:

- Any update (e.g., extension of a deadline) or clarification about the Program and any corrections to inadvertent errors in the Program information will be available on the Program webpage. In addition, MEA will communicate clarifications and updates made after the application deadline directly to applicants or grantees, as applicable, by letter and/or email. The final grant amount for each Grantee will be made after review of all proposals received and is subject to funding availability for the Program and any relevant statutory requirement applicable at that time.

Questions may be directed to:

Natalie Buscemi, Transportation Program Manager at transportation.mea@maryland.gov or 410-537-4071.