



## **Guidelines for Electric Vehicle Infrastructure Grant Program**

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# **ELECTRIC VEHICLE INFRASTRUCTURE GRANT PROGRAM GUIDELINES**

## **BACKGROUND**

### **The Role of Electric Vehicles in a Sustainable Transportation Sector**

The State of Maryland's transportation infrastructure plays a vital role in the movement of people and goods throughout the region, not only for Maryland residents but also for the larger network of U.S. highways and distribution channels along the Eastern Coast. Maryland's highways and mass transportation systems serve state, regional and national transportation and freight movement interests, and also function as a key element of transportation to and around the Nation's capital.

Volatility in oil supplies worldwide which affects energy prices throughout the U.S. impacts the security and stability of Maryland's transportation system now and in the years ahead. The mission of this program is to address these critical issues facing Maryland transportation systems to ensure mobility for all State residents, making Maryland an attractive place to live, work, and visit.

The transportation sector is responsible for 32 percent of Maryland's greenhouse gas emissions according to the Maryland Climate Change Commission, and contributes significantly to our ozone air pollution problem. Reducing emissions from this sector is critical to achieving reductions in greenhouse gas emissions, and obtaining our air quality goals. Existing technologies available in the near term will allow us to meet our transportation needs with fewer carbon dioxide emissions, reduced tailpipe emissions, and reduced reliance on petroleum imports.

The December 2012 Maryland Electric Vehicle Infrastructure Council (EVIC) report to the Governor and Legislature concluded that a viable network of Electric Vehicle Charging Infrastructure, termed Electric Vehicle Supply Equipment (EVSE), is necessary to encourage adoption of Electric Vehicles (EV) into mainstream use in Maryland. The State of Maryland has identified a goal of having 60,000 Electric Vehicles (EVs) registered in Maryland by 2020. To achieve this goal, EVIC recommended that the State incentivize EV ownership by ensuring adequate availability of EV charging infrastructure.

### **Dedication of Funding for EV Infrastructure**

The Maryland Office of the Attorney General (OAG), acting on behalf of the State of Maryland, filed a complaint in a multi-state federal lawsuit against American Electric Power Service Corp. (AEP) and other defendants in the United States District Court for the Southern District of Ohio, Eastern Division, for alleged violations of the Clean Air Act. On December 7, 2007, the Court issued a Consent Decree that, among other things,

required AEP and other defendants to provide funds to Maryland and other states for environmental mitigation projects identified by the States, “by and through their respective Attorneys General”, that “pertain to energy efficiency and/or pollution reduction.” The Consent Decree was amended in 2013 to provide additional funds from the defendants for such projects, also at the discretion of the state Attorneys General.

The Maryland Attorney General, in cooperation with the Maryland Energy Administration (MEA) and the Maryland Departments of Environment (MDE) and Transportation (MDOT), has determined that One Million Dollars (\$1,000,000.00) of the Consent Decree funds (Consent Decree Funds or Funds) should be used to promote the installation and use by the public of DC Fast Charging Stations for electric vehicles in the State. The OAG has requested that the MEA, working with MDE and MDOT, develop and implement a grant program to use and distribute these funds for that purpose.

## **PROGRAM OVERVIEW**

Establishing an adequate charging infrastructure is necessary to address one of the prime concerns believed to influence consumer purchase and use of EVs, “range anxiety.” Range anxiety describes a condition in which the consumer is hesitant to buy an EV due to concerns about being stranded without access to charging infrastructure or being unable to complete a trip given the constraints of the vehicle. This EV infrastructure grant program is designed to help alleviate this concern.

The state of Maryland has been very active in establishing a diverse charging network. Up until now, efforts have mainly focused on Level 1 and Level 2 charging stations that can take hours to recharge vehicles. This effort needs to be complemented by a robust network of Level 3 DC Fast Chargers which can provide a full charge in approximately 30 minutes. This grant program is intended to start the build out of a statewide fast charging network. A statewide fast charging network is also needed to facilitate travel to and through the State enabling the flow of people and goods throughout the region.

## **INTENDED APPLICANTS**

Private corporations/companies are eligible to apply for the Electric Vehicle Infrastructure Grant Program.

Eligible projects must be sited within Maryland and must apply commercially available technologies.

Grants will not be awarded to fund research or demonstration projects.

## **GRANT AMOUNTS**

The total amount of funding currently available for this grant program is \$1.0 million.

MEA will issue a grant(s) to one or more eligible applicants, who desire to partner with the State to plan, install, operate and maintain a DC Fast Charging Station infrastructure network in Maryland.

**The minimum grant award under this program is \$60,000.**

Applicant cost share is required to be at least 50%.

This is a fixed price, reimbursable grant program under which funds will be provided to selected grantee(s) for work after it is completed or upon meeting designated milestones. A detailed budget documenting the eligible costs will be required for reimbursement.

## **APPLICATION PROCESS**

Each interested party must complete an application and send or deliver\* it along with all required documentation to:

Mr. Chris Rice  
Program Manager  
60 West Street, Suite 300  
Annapolis, MD 21401  
[chris.rice@maryland.gov](mailto:chris.rice@maryland.gov)

\*If sending hard copies of the application, the original, as well as four copies should be supplied.

All applications should contain the name, mailing address, and email address of a representative able to receive electronic communications related to this program.

Applications can be obtained at:

<http://www.energy.maryland.gov/Transportation/evip.html>

**Completed applications must be received at MEA no later than October 1, 2014 at 5:00 PM.**

## **TECHNICAL SPECIFICATIONS**

# **Please read these guidelines carefully before requesting funds from the Electric Vehicle Infrastructure Grant Program.**

These guidelines describe eligibility, funding limitations, the grant submittal and approval process, and specific information needed in the grant application.

MEA anticipates issuing one or more grants to applicants for installation of a network of DC fast charging stations in Maryland that meet the specifications described in this section.

## **1. Level of Charging Stations**

Successful applicants must install direct-current (DC) fast charging equipment, sometimes called DC Level 3 (typically 480 V 3-phase AC input), which enables rapid charging of electric vehicles. A DC fast charge can add 60 to 80 miles of range to an Electric Vehicle (EV) in about 20 minutes.

## **2. Charging Connector Standard**

There are currently two connector standards for DC fast charging stations, CHAdeMO and SAE. EVs capable of fast charging are likely equipped with either of these standard industry connectors. In order to facilitate charging of all vehicles, the DC Fast Charging stations installed through this grant must be configured with both CHAdeMO and SAE Combo charging standards at each location (either as a dual connector station or as two separate stations).

## **3. Siting Requirements**

To further address range anxiety, the State wishes to facilitate the deployment of a DC Fast Charging network that will enable travel to and through the State from the surrounding region. To that end, successful applicants must propose locations that will be of strategic importance to extending the range and reach of EVs along priority transportation corridors, such as major highways or at significant tourism locations. Proposed locations should include Western and Southern Maryland, as well as the Eastern Shore and the Baltimore-Annapolis-Washington DC metropolitan areas, as suggested in the green shaded areas in Figure 1, and must meet the following criteria:

- Proposed stations must serve highway traffic and should be located either within 1 mile of Federal or State highway exits, or within Metropolitan areas.
- Distances between charging stations should be approximately:
  - Central Maryland – less than 40 miles
  - Eastern Shore – 40 to 60 miles
  - Western Maryland – 30 miles

- Southern Maryland – 40 to 60 miles
- Figure 1 indicates the general areas, by zip code, in which stations would be desirable and should be used for guidance purposes only.
- Applicants must be able to secure property rights, easements, right of way and access to property as necessary and supply accompanying documentation (examples- letter of support) with the completed grant application.
- Stations shall be operable and accessible to the public on a 24/7 basis and contain adequate lighting for all weather conditions.
- Stations shall be located such that they remain operable and accessible year round as well as maintained to be free of both manmade and natural obstructions.

#### **4. Network Interoperability**

To enable EV drivers to charge their vehicles at any public DC Fast Charging station, successful applicants must install interoperability software and supporting technology that allows drivers to “roam”, i.e. to charge at stations outside of their network and to charge in the absence of membership in any charging network. To support this, it is required that all funded chargers apply the Open Charge Point Protocol (OCPP) communication standard that allows charging stations and central systems from different vendors to communicate.

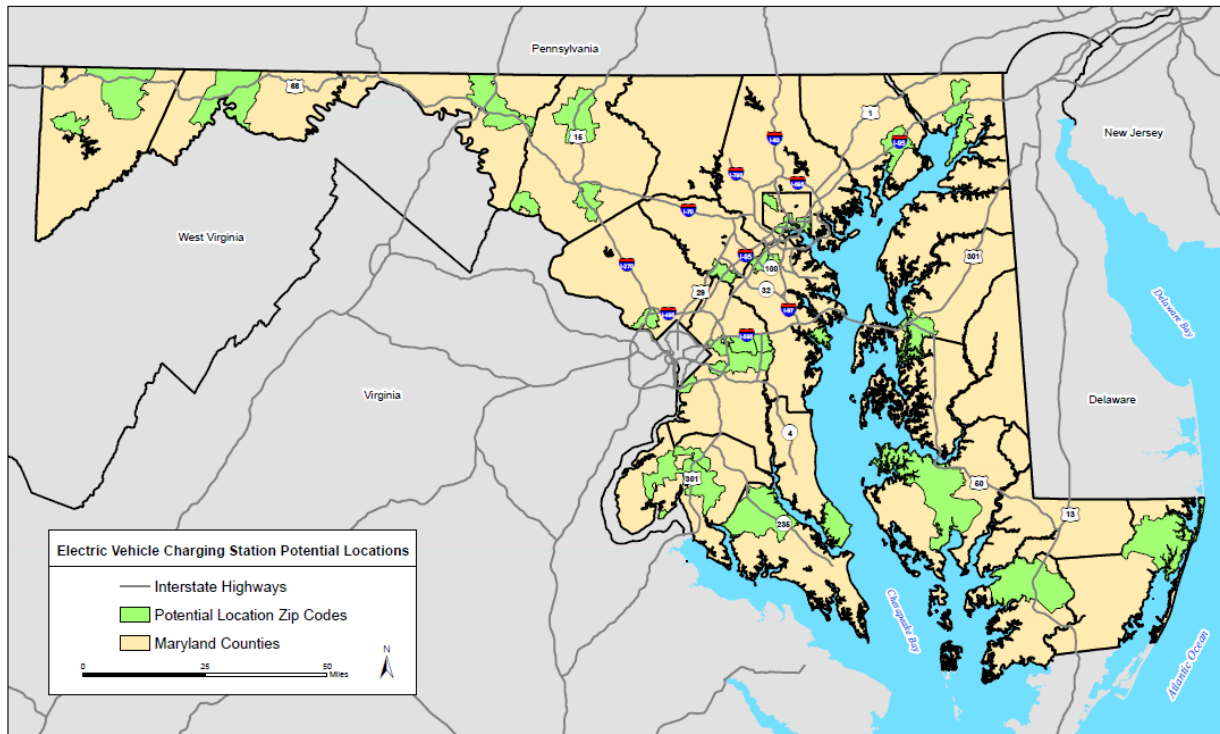
#### **5. Smart Charging Software**

In order for the State to strategically locate and build out its charging infrastructure, it needs to collect usage data from charging stations installed under this grant. Successful applicants must include smart charging software in their installations to enable the collection and reporting of usage data as provided under “*Reporting Requirements*”, below.

#### **6. Compliance with Americans with Disabilities/Accessibility Standards**

DC Fast Charging stations installed under this grant are public accommodations and must be accessible to all EV drivers. Successful applicants must demonstrate that their installations will meet accessibility standards under the Americans with Disabilities Act.

### **Figure 1: DC Fast Charger Location Guide**



## **7. Commitment to Operation and Maintenance**

In order to ensure that the installed equipment remains in good working order, successful applicants must submit an operation and maintenance plan/schedule, which the original owner and its successors will be responsible for throughout the duration of the equipment’s use at the site as described in number 9, below.

## **8. Signage**

While federal highway signs have been developed for EV charging, wayfinding and site-specific signs are at the discretion of the jurisdiction or property owner. In order to enable EV drivers to locate and identify DC fast charging sites, wayfinding and site signage is required for each location. Applications must include a plan for installing signage approved by MDOT and its modal agencies (e.g. State Highway Administration and Maryland Transportation Authority, as appropriate). Additional information can be provided at the July 22, 2014 pre-application meeting. Information on the governance of signage on Maryland roads can be found in the 2011 Manual on Uniform Traffic Control Devices (MUTCD) with the Maryland Supplement. This document can be found at:

<http://www.roads.maryland.gov/Index.aspx?PageId=835>

## **9. Program Timeframe**

In order to be eligible for consideration, the successful applicant must demonstrate that their project will start and be completed within the timeframe provided in the Program Time Line section below. Charging stations, including surrounding site, must be maintained in good operating condition and remain operable for at least five years from completion of grant agreement.

## **10. Additional Information**

Any questions related to the information contained in these guidelines should be directed to the Program Manager, Chris Rice, at (410) 260-7207 or [chris.rice@maryland.gov](mailto:chris.rice@maryland.gov).

A pre-application webinar will be held on July 22, 2014 at 11:00 AM for all parties interested in submitting a grant application. During this webinar, MEA will answer questions regarding these guidelines and the application as well as provide additional information regarding this grant program. A webinar summary will be provided on the MEA program webpage: <http://www.energy.maryland.gov/Transportation/evip.html>

## **PROGRAM TIME LINE**

Please pay close attention to the dates set forth below. It is important to note that if awarded a grant, the project must be finished and all invoices must be submitted to MEA by October 1, 2016.

- |                        |   |
|------------------------|---|
| <b>July 1, 2014</b>    | -Grant Program announced and posted to MEA website.   |
| <b>July 22, 2014</b>   | -A pre-application meeting will be held to answer questions and determine if any amendments to the program are needed. <b>See program webpage for additional information.</b> |
| <b>October 1, 2014</b> | -Applications must be received at MEA by 5:00 PM.<br>-Email confirmation will be sent to each applicant verifying receipt of application.                                     |
| <b>October 2014</b>    | -Evaluation of grant applications   |
| <b>November 2014</b>   | -Notification of grant award or denial is made to all applicants via email.   |



<b>November 2014</b>	-Grant agreements sent to grantees that received award notifications. -Project initiation can begin following execution of grant agreement by both parties.
<b>January 1, 2015</b>	-First monthly report is due from grantees. Reporting will continue quarterly through the end of the 5-year grant period.
<b>Ongoing</b>	-Quarterly reporting.
<b>October 1, 2016</b>	-Project construction period ends. All invoices must be submitted to MEA for reimbursement.

## **ELIGIBLE COSTS**

Eligible costs under this grant program include those directly attributable to the site design, installation, labor, site preparation, upgrade for utility connections, signage and equipment necessary to implement and operate the proposed charging station.

The cost of electricity used to supply vehicles with a charge is ineligible for reimbursement. Additionally, the cost of ongoing equipment and site maintenance is ineligible for reimbursement.

## **CONTENT OF APPLICATION**

Applicants must complete the EVIP application form found on the program webpage . All applications must include the following:

- Information demonstrating that the application meets the requirement of elements 1 through 9 described under Technical Specifications, above.
- A general project narrative, including the charger manufacturer and model number, as well as any innovative technology integration, concepts or partnerships. Project narratives should include any partnerships with fleets, businesses or governments and a description of how the charger meets the industry standards.
- A description of the geographic distribution including the specific street address of station locations. Applicants should also provide an aerial map (i.e. Google Maps – Satellite view) of each station location. Documentation regarding ownership of potential properties must be provided. For locations not owned by the applicant, letters of support must be submitted by property owners.

- Applicants must provide a total estimated project cost and the specific grant amount the applicant is seeking to complete the project. Applicant must demonstrate the required 50% cost share.
- Applicants must draft a budget with a breakdown of charging station, electrical infrastructure (i.e., upgrade for utility connections), engineering, permitting and labor costs.
- Applicants must submit an implementation timeline.
- Information documenting financial commitments from banks or investors.
- An operation and maintenance plan/schedule. Plans must include a section on end user fees and fee structures.
- A signage plan.
- A narrative describing any experience installing, operating or maintaining an EV charging station network.
- Biographies of key project personnel.

## **EVALUATION OF APPLICATIONS**

In order to evaluate all applications, a Maryland Electric Vehicle Infrastructure Program Review Team will be assembled. This team will consist of members from the MEA, MDOT, OAG, MDE and Maryland Clean Cities Coalition.

The MEA Program Manager may request additional information from an applicant to help evaluate an application.

### **SCORING AND AWARD CRITERIA**

The Maryland Electric Vehicle Infrastructure Program Review Team will score applications based on the following criteria:

- 1. Geographic Distribution of Stations** (Preference will be given to locations that meet the 1 mile exit and/or Metropolitan area requirements referenced in Requirement 3 under Technical Specifications.)
- 2. Cost Share (MINIMUM OF 50%. LARGER COST SHARE WILL RECEIVE A HIGHER SCORE)**
- 3. Ability to Complete Project During Specified Timeframe**

4. **Letters of Support**
5. **Innovative Technology, Concepts and Partnerships (For example: integration of solar and battery storage technologies will receive additional consideration).**
6. **Estimated Gallons of Petroleum Displaced**
7. **Signage, Operation and Maintenance Plan**
8. **Company's Financials, Including Bonding and Insurance**
9. **Experience Installing, Operating and Maintaining Network**

Applicants should address each scoring and award criteria in their grant applications.

## **GRANT APPROVAL**

MEA shall administer the grant program and the review team will score all grant applications. If an application is approved by MEA, a grant agreement between MEA and the grantee will be prepared that establishes the terms of the grant and other conditions needed to manage the grant. Award notification will be made in November 2014, and grant agreements will be sent electronically to awardees in November 2014. Once the grant agreement is executed by both MEA and the grantee, the grantee may begin project work and invoice MEA for grant funds as the project is completed.

As cited earlier, only costs incurred after execution of the grant agreement are eligible for funding. Project construction cannot begin until execution of the grant agreement. Costs incurred after award notification and prior to execution of the grant agreement (contract) are made at the applicant's risk. Funding may be assured only after final execution of the grant agreement. In addition, please note that this is a fixed price reimbursable grant program and as such, cost overruns **will not** be reimbursed.

## **TERMS AND CONDITIONS**

### *General Terms*

Grants are only available for projects that further the goals of this Electric Vehicle Infrastructure Grant program and meet eligibility criteria set forth herein and the terms and conditions of the grant agreement. Matching funds are required for this grant program. MEA reserves the right to fund all or none (\$0) of the money allotted depending on the quality and eligibility of applications. Invoices cannot be submitted until there is an executed grant agreement between the applicant and MEA. All invoices must be **submitted by October 1, 2016**. All grants from MEA are on a reimbursement basis only. Advance payments are not available under this grant program.

MEA will reimburse grant funds in arrears only after complete invoice and report documentation has been submitted. MEA shall have sole discretion to determine whether

complete invoice and report documentation has been submitted. Under no circumstances will MEA fund grant monies for work that has yet to be performed or for costs that have yet to be incurred.

Funds may be used in conjunction with other financing programs; however, the Grant funds may only be used for eligible costs as outlined in the **ELIGIBLE COSTS** section above.

#### Reporting Requirements

Grantees shall be responsible for submitting a report to MEA at the end of each quarter and a final report at the end of the funding period. Based on the Program Time Line provided above, the first quarterly report will be due on January 1, 2015 and the final report will be due by September 30, 2016. In addition, quarterly operational reporting will commence once the station/s have been put into service and will continue until the end of the 5-year grant period. Quarterly reports will indicate the status of each station, the percentage of time the station was operational, kWhs consumed, average duration of charging event, number of gallons of gasoline displaced, number of vehicles utilizing equipment, quantified environmental benefits, and a narrative on the project's progress. Quarterly reports should be submitted on the form provided by MEA.

#### Maintain Communication

The grantee shall notify MEA of any problems, operational changes from the original project proposal, or to request an extension. The notifications made in compliance with this condition can be made to the MEA Program Manager either by written letter or electronic email and should be provided within 10 days.

#### Site Visits

Grantee shall allow MEA, or an MEA authorized representative, to conduct project site visits during normal business hours. It is MEA's intent to give reasonable notice to the grantee of any proposed site visit. Such notice shall be provided at least 24 hours in advance of the visit. To the extent provided by State law, neither MEA nor its agents, representatives, or employees, shall be liable for any property, product liability, personal injury, or any other types of claims, including claims based on the negligence of MEA, its agents, representatives, or employees, arising out of or related in any way to the activities of MEA, its agents, representatives, or employees at the project site.

#### Permits

Grantee is responsible for identifying and obtaining all local, state and federal permits and licenses necessary for the implementation and operation/execution of projects.

#### Historic Review

All undertakings assisted by MEA are subject to review and consultation under Section 106 of the National Historic Preservation Act and/or the Maryland Historical Trust Act of 1985. The purpose of this review is to consider the effects of projects on historic properties. Project areas that contain no buildings, structures or significant landscape features more than 45 years old and are not recorded in the Maryland Inventory of

Historic Properties may be exempted from this review process. Grant applicants should provide MEA with street addresses and an aerial map (i.e. Google Maps – Satellite view) showing the project location in order to conduct the required historic preservation review.

Additional Grantee Responsibilities

The grantee will be responsible for the additional responsibilities listed below:

- day-to-day customer service actions such as managing driver access and providing driver support and station uptime monitoring,
- prompt maintenance and repair, and
- marketing
- demonstrating the ability to obtain financials, bonding, insurance and any other information required for execution of the grant agreement.

**CONFIDENTIALITY OF INFORMATION**

MEA shall treat any information clearly and reasonably identified as confidential commercial information or as a trade secret by the Applicant in accordance with Maryland’s Public Information Act (PIA) as set forth in Sections 10-611 *et seq.* of the State Government Article of the Annotated Code of Maryland.

**FOR MORE INFORMATION**

Any questions regarding these guidelines and applications should be directed to:

Chris Rice  
Program Manager  
TEL: 410-260-7207  
FAX: 410-974-2250  
[chris.rice@maryland.gov](mailto:chris.rice@maryland.gov)