



STATE OF TENNESSEE

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

REQUEST FOR INFORMATION

**VOLKSWAGEN DIESEL SETTLEMENT ENVIRONMENTAL MITIGATION
TRUST**

LIGHT DUTY ZERO EMISSION VEHICLE SUPPLY EQUIPMENT

Issue Date: November 1, 2019

Due Date/Time: December 6, 2019 / 4:00 p.m. (CT)

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Note: This Request for Information (RFI) is not a solicitation for projects. Submitting a response to this RFI is voluntary and is not a prerequisite for responding to any future solicitations issued by the [Tennessee Department of Environment and Conservation \(TDEC\)](#) with regard to the State's allocation under the Volkswagen Environmental Mitigation Trust (EMT).

1. INTRODUCTION

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

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

For more information on the VW Settlement, the EMT, and the State of Tennessee's BMP, which was last updated on May 22, 2019, please visit <https://www.tn.gov/environment/VWSettlement>.

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

¹ State Trust Agreement, https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_April_12_2019.pdf.

2. LIGHT DUTY ZERO EMISSION VEHICLE SUPPLY EQUIPMENT

The State will allocate 15% of its EMT allocation to the ***Light Duty Zero Emission Vehicle (ZEV) Supply Equipment*** EMA category. As noted in Appendix D-2 to the State Trust Agreement,² this is the maximum allowable percentage of EMT funds that Beneficiaries can dedicate to this category.

Within the ***Light Duty ZEV Supply Equipment*** EMA category, the State will fund a portion of the cost to purchase and install publicly accessible light duty electric vehicle supply equipment (EVSE) at both Government Owned properties and Non-Government Owned properties. The State may elect to fund a portion of the cost to purchase and install eligible light duty EVSE at both workplaces and multi-unit dwellings. Based on anticipated use cases, the State will fund only Level 2 or Direct Current Fast Charging (DCFC) equipment for publicly accessible EVSE. For workplace and multi-unit dwelling infrastructure, the State will fund only Level 1 or Level 2 EVSE.

TDEC anticipates releasing a solicitation in 2020 based on a) input from the Request for Information (RFI) and b) results from the recently completed Statewide Electric Vehicle (EV) Charging Infrastructure Needs Assessment, which will be published by Drive Electric Tennessee on November 8th, 2019. The document will be posted on TDEC's Drive Electric Tennessee webpage here:

<https://www.tn.gov/environment/program-areas/energy/state-energy-office--seo-/programs-projects/programs-and-projects/sustainable-transportation-and-alternative-fuels/sustainable-transportation-and-alternative-fuels/drive-electric-tennessee.html>

Table 1 on the following page summarizes the State's initial programmatic determinations regarding this EMA category, as outlined in Section V. Implementation of the State's BMP.³

² State Trust Agreement, Appendix D-2,
https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_April_12_2019.pdf.

³ State of Tennessee's Beneficiary Mitigation Plan,
https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/TDEC%20VW%20EMT%20BMP_Updated%205.22.19.pdf.

Table 1: Light Duty ZEV Supply Equipment Summary

Eligible Applicants	Non-Government and <i>Government</i>
Anticipated % of Funds	15% (\$6,863,987.16)
Available Funds	Initial Eligible Project Funds: \$6,177,588.45 Initial Eligible Administrative Expenditures Reserve: \$686,398.71
Funding Caps	To be determined. Funding caps for specific project types will be announced during the project solicitation phase. These funding caps shall not exceed those set forth in the State Trust Agreement for this EMA category.
Program / Project Considerations	• The State Trust Agreement allows Beneficiaries to fund the costs necessary for, and directly connected to, the acquisition, installation, operation and maintenance of new <i>Light Duty ZEV Supply Equipment</i>. However, with regard to "Operation and Maintenance Costs," the State has determined that it will consider funding recurring Operation and Maintenance Costs only for State-owned <i>Light Duty ZEV Supply Equipment</i> that will be available to the public. • See Appendix 4 to the State's BMP for the State's definitions of the terms "Operation and Maintenance Costs," "Power Supply Equipment," and "State-owned."

3. ACRONYMS AND ABBREVIATIONS

ADA: Americans with Disabilities Act

BMP: Beneficiary Mitigation Plan

DCFC: Direct Current Fast Charging

EMA: Environmental Mitigation Action

EMT: Environmental Mitigation Trust

EV: Electric Vehicle

EVSE: Electric Vehicle Supply Equipment

kW: Kilowatt

kWh: Kilowatt-Hour

MUD: Multi-Unit Dwelling

NOx: Nitrogen Oxide

RFI: Request for Information

TDEC: Tennessee Department of Environment and Conservation

VW: Volkswagen

WPC: Work-Place Charging

ZEV: Zero Emission Vehicle

4. DEFINITIONS

EVSE Network Provider: A company who provides networked access to an electric vehicle charger, which may or may not be manufactured by the company, allowing the charger to initiate a charging session either locally using a membership card or payment or through remote communication via a web application.

Fast charger: Supplies Direct Current (DC) electricity to a plug-in electric vehicle's battery. Power output levels from the charger may vary, but 40 kW or higher is generally considered fast charging.

Highway interchange: A road junction that uses grade separation and typically one or more ramps to permit traffic on at least one highway to pass through the junction without interruption from other crossing traffic streams.

Level 1 Charger: Supplies single phase 120 Volt Alternating Current (AC) electricity to a plug-in electric vehicle, generally 16 Amps or less.

Level 2 Charger: Supplies single phase 240 Volt Alternating Current (AC) electricity to a plug-in electric vehicle, generally 32 Amps or higher.

Plug: A device for making an electrical connection between a plug-in electric vehicle and a power supply, consisting of an insulated casing with metal pins that fit into holes in an outlet.

Rural area: For the purposes of this RFI, "rural" encompasses all population, housing, and territory not included within the definition of an urban area (see definition below).

Site Host: A property owner, lessee, or manager who agrees to locate an electric vehicle charger on their premises, or premises for which they are responsible. This definition may be subject to revision.

Transportation Network Company: A company that uses an online-enabled platform to connect passengers with drivers using non-commercial vehicles in real-time or scheduled in advance. Sometimes used synonymously with "Ride Hailing."

Urban area: The Census Bureau identifies two types of urban areas: (1) Urbanized Areas (UAs) of 50,000 or more people; (2) Urban Clusters (UCs) of at least 2,500 and less than 50,000 people. (US Census Bureau's 2010 Urban Area FAQs – [link](#))

5. INFORMATION REQUESTED

The State is seeking information in response to the following questions; respondents may submit information in response to some or all of the questions. This RFI is not a solicitation for projects. Information obtained from this RFI will be used solely for planning purposes.

5.1 Respondent Information

Name of Organization or Individual: _____

Organization Point of Contact and Title: _____

Phone Number: _____

Email: _____

Respondent Type (select all that apply):

- ☐ EV manufacturer
- ☐ EVSE hardware manufacturer
- ☐ EVSE network provider
- ☐ Government
 - ☐ Local
 - ☐ State
 - ☐ Federal
- ☐ Higher Education Institution
- ☐ Multi-unit dwelling (e.g., apartment, townhouse, or condominium)
- ☐ Potential applicant
- ☐ Potential site host
- ☐ Resident of the State of Tennessee
- ☐ Utility or local power company
- ☐ Workplace / employer
- ☐ Other (please describe): _____

Proprietary Information:

TDEC's Office of Energy Programs is required by Tenn. Code Ann. § 4-3-514 (b)(1) to "maintain the confidentiality of all proprietary information it may acquire." Tenn. Code Ann. § 4-3-514 (b)(2) defines "proprietary information" as "trade secrets and commercial or financial information that is used either directly or indirectly in the business of any person submitting information to the office under this chapter, and that gives such person an

advantage or an opportunity to obtain an advantage over competitors who do not know or use such information.”

Any proprietary information included within a response to this RFI must be submitted as a separate attachment and must be clearly marked as proprietary. Please indicate whether your response includes proprietary information.

- ☐ No proprietary information included
- ☐ Proprietary information included

5.2 General Questions

- Please indicate which EMA sub-category(ies) should be funded under ***Light-Duty ZEV Supply Equipment***:
 - ☐ Light duty EVSE that is available to the public;
 - ☐ Light duty EVSE that is available at a workplace but not to the general public; or
 - ☐ Light duty EVSE that is available at a multi-unit dwelling but not to the general public.
- How should the State define “available to the public?” What factors should the State take into consideration when determining whether a site meets the definition of available to the public? Please review and indicate support for or against the proposed definition below. If against, please propose changes and include justification.
 - **Proposed definition of “Available to the public”:**
 - EV chargers with non-proprietary plugs which are accessible to any driver, without any physical barrier to vehicle ingress or egress or without software limitations that prevents certain drivers from initiating a charge. Such chargers must be accessible and available 24 hours per day, 7 days per week, 365 days per year.
- What is the maximum amount of funding that the State should provide for each use case, keeping in mind project viability? Please consider the maximum funding caps outlined in Appendix D-2 to the State Trust Agreement:

Table 2: Maximum Funding per Project and Ownership Type

	Government Owned	Non-Government Owned
Public Charging	100%	80%
Workplace Charging	60%	60%
Multi-unit Dwelling	60%	60%

- Should TDEC consider accommodations for drivers that go beyond the requirements of the Americans with Disabilities Act (ADA)? If so, what specific accommodations should be considered?
- What process, method, or protocol, if any, should be used to measure and verify (1) the amount of energy delivered to an electric vehicle from an EV charger and (2) the duration of the charge event?
 - *Please note that Local Power Companies (LPCs) who distribute electricity from the Tennessee Valley Authority (TVA) include flow-down clauses from their All Requirements Power Contract with TVA that prohibit the resale of electricity delivered (e.g., \$/kWh).*
- How can the cost of installing EVSE be minimized?
- How can the cost of operating and maintaining equipment be minimized?

5.3 Direct Current Fast Charging (DCFC)

Note: Please refer to the *Statewide Electric Vehicle (EV) Charging Infrastructure Needs Assessment*, which will be published by Drive Electric Tennessee on November 8th, 2019 ([link](#)). The Needs Assessment will include a map that identifies potential DCFC corridors in Tennessee.

General Questions for DCFC

- Please address the business model and ownership considerations of siting DCFC in rural and urban areas.
- What are best practices for user experience, especially for reporting operation and maintenance issues or accessibility issues?
- What, if any, minimum specifications should be set for DCFC stations in order to future-proof the sites?
 - Minimum power capacity (in kW)
 - Minimum number of chargers supplying power simultaneously
 - Minimum number of non-proprietary plugs per station, by type (CHAdeMO and SAE Combo)
 - Minimum electrical capacity from the utility, or related make-ready provisions to make future expansions less costly (e.g., additional conduit, larger transformers, etc.).
- What payment options should be allowed or required at DCFC stations?
- What siting and design specifications should be considered at DCFC station locations?
- What operation and maintenance standards should be required of site hosts and/or EVSE owners?
- What signage should be required at station sites and/or along roadways leading to and from the station sites? *Please note that the EMT cannot fund signage.*

DCFC on Corridors:

- **Note:** Funding for DCFC on corridors will be informed by the “Corridors” Use Case Track from the *Statewide Electric Vehicle (EV) Charging Infrastructure Needs Assessment* which will be published by Drive Electric Tennessee on November 8th, 2019 ([link](#)).
- How should the State define corridor charging? What should constitute a corridor? Please review and indicate support for or against the proposed definition below. If against, please propose changes and include justification.
 - **Proposed definition of “Corridor”:**
 - A corridor includes major interstates and select U.S. and state highways which connect rural and urban areas. The following roadways have been identified as corridors as classified by FHWA in the 2013 “Highway Functional Classification: Concepts, Criteria and Procedures” manual ([link](#)):
 - **Primary corridors** are select roadways defined as *Interstates* in section 3.1.1 of the FHWA Manual which connect rural and / or urban areas.
 - **Secondary corridors** are select roadways defined in sections 3.1.2 *Other Freeways & Expressways* and 3.1.3 *Other Principal Arterials* of the FHWA Manual which connect rural and / or urban areas.
- How should DCFC on primary and secondary corridors be prioritized (i.e., should primary corridors be completed before secondary corridors and why)?
- The State is considering using the terminology “FAST 50” to classify corridors for DCFC. Please review and indicate support for or against the proposed definition below. If against, please propose changes and include justification.
 - **Proposed definition of “FAST 50”:**
 - Select highway corridors with DCFC such that the maximum driving distance is 50 miles between charging stations in order to comply with the requirements of FHWA’s “Corridor-Ready” designation for EV Charging corridors.⁴ Stations must include 2 or more fast chargers capable of at least 50kW concurrent output power level each. Each fast charger shall have both J1772 combo (CCS) and CHAdeMO plugs.
- What should the maximum distance between EVSE locations be?
- How far from highway interchanges should chargers be located?
- How many plugs should be installed at each EVSE location, and what type of plugs should be available?
- What minimum and ideal power levels should be considered for EVSE locations along corridors (e.g., 50 kW, 100 kW, or 150 kW)?

⁴ FHWA, Designation of Alternative Fuel Corridors, Request for Nominations, Round 4,

https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/rfn4.cfm

- What amenities provide the most value to EVSE locations along corridors (e.g., proximity to retail, food, restrooms, etc.)?
- What other information should be taken into consideration when siting EVSE along a corridor?

Community DCFC Charging

- How should the State define community charging? What are the distinct needs of community charging, as compared to corridor charging? Can this type of charging serve as a substitute for residential charging (i.e., serve as a viable charging option for those without access to home charging)? Please review and indicate support for or against the proposed definition below. If against, please propose changes and include justification.
 - **Proposed definition of “Community Charging”:**
 - Community charging provides a fast charging option (80% in 30 minutes or less) utilizing DC fast chargers, generally located in urban areas. These locations may also include Level 2 charging. Community charging is intended to serve: (1) the intra-urban traveler seeking a “top off” charge, (2) PEV owners who do not have regular overnight charging opportunities (e.g., residents of multi-unit dwellings), and (3) the inter-urban traveler passing through or arriving in an urban area on the way to a final destination.
- What characteristics should the State evaluate for community fast charging (e.g., location, population or EV density, proximity to primary or secondary corridors, amenities, safety, lighting, etc.)?
- Are there potential use cases for community fast charging that should be prioritized (e.g., charging for Transportation Network Company drivers and/or car sharing)? If so, what are these use cases and how should the State evaluate potential sites for these use cases?
- How many plugs should be installed at each location and what type of plugs should be available?
- What minimum and ideal power levels should be considered for community fast charging stations (e.g., 50 kW or 150 kW)?

5.4 Level 1 & Level 2 Charging

Level 1 and 2 General Questions

- What networking requirements (if any) should be required?
- Under what conditions should users pay for Level 1 or Level 2 EVSE usage?
- What applications are suitable for Level 1 charging (120V) vs. Level 2 EVSE (240V)?

Level 1 and 2 (Workplace)

- What are common barriers to workplace EVSE deployment?

- What networking requirements (if any) should be required?
- What factors make a workplace an ideal location for EVSE?
- What charging levels are preferred for workplace EVSE (Level 1 or Level 2) and why?
- How many chargers should be installed at each workplace? Should this be dependent on the number of employees with EVs?

Level 1 and 2 (Multi-Unit Dwellings)

- What networking requirements (if any) should be required?
- What are common barriers to EVSE deployment in multi-unit dwellings?
- Should multi-unit dwellings impose fees on residents for EVSE usage?
- How many chargers should be installed at each multi-unit dwelling? Should this be dependent on the number of residents with EVs?
- What charging levels are preferred for multi-unit dwelling EVSE (Level 1 or Level 2) and why?

6. ADDITIONAL INFORMATION

RFI Questions:

All questions concerning this RFI should be directed to the TDEC Office of Energy Programs via email, TDEC.OEP@tn.gov. The subject line of your email should read: "Questions regarding VW ZEV RFI."

RFI Responses:

TDEC appreciates your participation and responses to this RFI. Submit your response via email to TDEC.OEP@tn.gov.

Format: Please compile your response into a single document (PDF or Word are acceptable file types), with each RFI question listed above your response. Respondents must also include a completed version of Section 5.1 Respondent Information filled in with requested information. It is recommended that attachments with file sizes exceeding 10MB be compressed (i.e., zipped) to ensure message delivery. The subject line of the email containing your response to this RFI should read: "Response to VW ZEV RFI." Responses must be received by December 6, 2019 / 4:00 p.m. (CT).

Public Posting of RFI:

This RFI will be posted at the following location:

Tennessee Department of Environment and Conservation's Volkswagen Diesel Settlement Webpage: <https://www.tn.gov/environment/VWsettlement>.

Public Posting of Statewide Electric Vehicle (EV) Charging Infrastructure Needs Assessment:

The needs assessment will be posted at the following location:

<https://www.tn.gov/environment/program-areas/energy/state-energy-office--seo-/programs-projects/programs-and-projects/sustainable-transportation-and-alternative-fuels/sustainable-transportation-and-alternative-fuels/drive-electric-tennessee.html>

Program Contact:

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

The Office of Energy Programs – Volkswagen Diesel Settlement Environmental Mitigation Trust
Tennessee Department of Environment and Conservation
C/o Ryan Stanton, Senior Consultant – Strategic Energy Initiatives
William R. Snodgrass Tennessee Tower
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