STATE OF TENNESSEE VOLKSWAGEN DIESEL SETTLEMENT ENVIRONMENTAL MITIGATION TRUST FAST CHARGE TN NETWORK GRANT PROGRAM APPLICATION MANUAL



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VW SETTLEMENT OVERVIEW:

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 United States Department of Justice (DOJ) filed a complaint against VW, alleging that the company had violated the Clean Air Act. In October 2016 and May 2017, the U.S. District Court, Northern District of California ("Court"), 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 Environmental Mitigation Trust (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 final BMP, which was last modified on July 19, 2022, please visit <u>https://www.tn.gov/environment/VWSettlement.</u>

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

STATE OF TENNESSEE VW SETTLEMENT EMT FAST CHARGE TN NETWORK GRANT PROGRAM:

The Tennessee Department of Environment and Conservation (TDEC) and the Tennessee Valley Authority (TVA) have partnered to develop a statewide electric vehicle (EV) fast-charging network to power the growth of EVs across Tennessee and reduce barriers to transportation electrification. Specifically, <u>the two have signed an agreement</u> to collaborate and fund a network of fast-charging station locations every 50 miles along Tennessee's interstates and major highways. This "Fast Charge TN Network" will add approximately 60 new charging locations along prioritized <u>corridor</u> <u>infrastructure gaps</u>. For reference, as of the program start in August 2021, there were only 23 fastcharging locations currently operating in Tennessee that are open to all consumers and support both charging standards common to EVs. Thanks in part to the creation of the Fast Charge TN network, there are now approximately 80 such fast-charging locations in Tennessee, but gaps remain. With regard to the use of terminology (charging station, charger, site, location, plug, and

¹ State Trust Agreement,

https://www.tn.gov/content/dam/tn/environment/energy/documents/vwresources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020. pdf.

port), please reference figure 1 below.



Figure 1. Example Fast Charging Site and Terminology

TDEC will leverage various funding sources to support the development of the Fast Charge TN Network. This partnership advances the State's goal of establishing a statewide fast-charging network that improves transportation efficiency, reduces vehicle emissions, promotes EV adoption, and strengthens the resiliency of our transportation network. TDEC has committed 15%, the maximum allowable, of the <u>State's Volkswagen Diesel Settlement Environmental Mitigation Trust allocation</u> to fund *Light Duty Zero Emission Vehicle Supply Equipment*. Initially, \$5.2 million from this fund was allocated to fastcharging infrastructure along Tennessee's interstates and major highways. This \$5.2 million was made available under Round 1 of the Fast Charge TN Network Grant Program ("Program").

As of April 2025, TDEC has approximately \$2.3 million in additional funding to commit to the Program, which is being released in this Round 2 solicitation. The remainder of the project will be funded by other program partners and program participant cost share.

On February 4, 2025, TDEC and TVA released a <u>Notice of Intent</u> to release the second solicitation for Fast Charge TN Network projects. A corresponding <u>infrastructure gap map</u> was also released to detail the 13 infrastructure gap areas of priority. Eligible applicants are now invited to complete a full grant application within the TDEC online grants management system (GMS).

Eligible applicants are limited to one application each. Applications may include multiple locations to address more than one corridor gap, if applicable. The terms and conditions of the Program are outlined in this Application Manual.

DEADLINE TO SUBMIT:

Applications and supporting documentation must be submitted electronically via the GMS, which may be accessed here: <u>https://tdec.smartsimple.com/</u>. Applications must be received by **4:00 PM Central, September 12, 2025**. TDEC will announce awards after conducting a comprehensive review and evaluation of all complete and eligible grant applications. Grant contracting efforts will occur shortly thereafter.

ELIGIBILITY AND KEY CONSIDERATIONS:

Eligible Applicants:

Eligible applicants include:

- Tennessee local power companies (LPCs)
- For-profit or nonprofit organizations authorized to do business in the State of Tennessee and that have a physical presence and operate in Tennessee, including but not limited to electric vehicle (EV) charging companies, fueling stations, private developers, private educational institutions, etc.
- Government entities, including local governments or public institutions of higher education. "Government" shall mean a State or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority).²

Eligible applicants may identify project team members / vendors at the time of application that will contribute to the project. This can include, but is not limited to: charging infrastructure or other equipment providers, contractors to perform installation or other project implementation work, turnkey charging infrastructure solutions providers, software providers, and site hosts. The services or equipment to be provided by identified project team members / vendors must be incorporated into the project's proposed budget and the applicant must provide vendor quotes as well as information on the vendor selection process at the time of application as supporting documentation.

 If a project team member / vendor is not identified at the time of application, then any subsequent procurement of equipment or services shall be made on a competitive basis, including the use of competitive bidding procedures, where practical. In each instance where it is determined that use of a competitive procurement method is not practical, supporting documentation shall include a written justification for the decision and for use of a non-competitive procurement.

Eligible Project Costs:

• For selected, eligible projects, the Program will provide up to 80% of the cost to purchase, install, operate, and maintain eligible EV fast-charging infrastructure that will be located within a <u>prioritized corridor gap</u> and made available to the public. Such costs for the purchase, installation, operation, and maintenance of EV fast-charging infrastructure will be referred to

² Environmental Mitigation Trust Agreement for State Beneficiaries,

https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-

resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020. pdf.

as "Eligible Project Costs."

- Eligible Project Costs include the cost associated with the purchase and installation of eligible EV charging infrastructure (e.g., utility make-ready activities such as the securing of three-phase power, trenching or laying of conduit, etc.); support services (e.g., engineering and design, site identification and qualification); and operational and maintenance costs purchased upfront, including maintenance services and network fees in addition to bollards and wheel stops.
- Grantees will be required to provide at least 20% of the Eligible Project Costs through direct or in-kind cost share. For purposes of this Program, in-kind cost share shall be comprised of noncash contributions with a verifiable market value made by the Grantee in support of the purchase, installation, operation, and maintenance of the charging infrastructure (e.g., electrical equipment and materials, staff time spent on charging station location make-ready efforts or infrastructure installation, etc.). Grantees will also be required to provide all remaining project costs not eligible for reimbursement under this Program (e.g., real estate costs, other capital costs, general maintenance, etc.). See section below on Non-Eligible Project Costs for more details. See Appendix C – Sample Grantee Invoice for a breakdown of reimbursable and non-reimbursable costs in the form of a sample invoice to TDEC.

Non-Eligible Project Costs:

- Non-Eligible Project Costs include the purchase or rental of real estate; other capital costs (e.g., construction of buildings, canopies, parking facilities, etc.); general maintenance (i.e., maintenance other than of the charging infrastructure); and legal fees associated with land acquisition.
- The Program will also not reimburse for administrative costs (i.e., costs not directly connected to purchase, installation, operation, and maintenance of the charging infrastructure), such as time spent on the completion of required reporting, contract management, Title VI compliance, etc.
- See Appendix C Sample Grantee Invoice for a breakdown of reimbursable and non-reimbursable costs in the form of a sample invoice to TDEC.

Program Requirements:

- The Program will require selected Grantees to install at least two DC fast chargers at each location, with the option to request funding to install a maximum of four DC fast chargers per location. Additionally, requests for funding may not exceed \$150,000 per fast charger to be installed. Grantees will be responsible for finding a suitable host site and purchasing, installing, owning, operating, and maintaining program-funded fast-charging equipment for a period of no less than five years.
- Fast-charging equipment and charging locations must comply with site selection guidelines, minimum technical specifications, and program accessibility requirements, which are outlined within Appendix A Program Guidelines. Additionally, Grantees will be required to complete and submit an environmental review checklist, which must be reviewed and approved before construction can begin.
- Selected Grantees will be responsible for owning, operating, and maintaining program-funded fast-charging equipment for a period of no less than five years.
- A site-host agreement will be required to show that the Grantee has been granted access to the property for at least a five-year period where charging stations are to be installed. If a Grantee owns the property, this will be confirmed via a Verification of Property Ownership

form provided by TDEC. The purchase or rental of real estate is a non-reimbursable cost under the Program.

- All program income (gross income earned by the program participant that is directly generated by the project or earned as a result of the project funding during the contract term) must conform with the following program income requirements:
 - Program income must be reinvested in or used to defray ongoing costs of the project (e.g., other maintenance fees, site host property rental costs, etc.);
 - Program income must be used for the purposes and under the conditions of the Grant Contract;
 - Costs incidental to the generation of program income may be deducted from gross income to determine program income, provided these costs have not been charged to the State;
 - Taxes, special assessments, levies, fines, and other such revenues raised by the Grantee are not program income unless the revenues are specifically identified in the State Grant Contract or by State agency regulations as program income; and
 - There are no requirements governing the disposition of program income earned after the end of the program's required period of performance (i.e., five years of charging station operation).

The following projects <u>are not eligible</u> for the State of Tennessee VW EMT Fast Charge TN Network Grant Program funding:

- Installation of charging infrastructure that is not publicly accessible;
- Installation of charging infrastructure that is not located within a prioritized corridor gap;
- Installation of charging infrastructure that does not meet the hardware or network requirements outlined within the minimum technical specifications;
- Development of a charging station that does not comply with the site selection guidelines or Program accessibility requirements; or
- Installation of a charging infrastructure technology that is not commercially available.

Grant Project/Reimbursement Timeline:

- Program participants will have 15 months from the effective date of the grant contract to complete the project. No-cost extensions will be evaluated on case-by-case basis.
- Payment of project expenses will take place on a reimbursement basis. Reimbursement will be made following charging station completion, commissioning, submission of supporting documentation of costs incurred, and other required invoice documentation. <u>TDEC will not reimburse expenses that are incurred prior to the start date of the grant contract.</u>
- The Grantee may proceed with its project after it is notified by State that its grant contract has been fully approved and executed.

Additional Considerations:

 Any information submitted in response to the solicitation for the State of Tennessee's Fast Charge TN Network Grant Program may be considered public record and will be subject to disclosure to the public as required by Tennessee law. The VW EMT BMP and all documentation and records submitted by TDEC in support of each funding request to the Trustee will be available to the public on the TDEC webpage, which is accessible at <u>https://www.tn.gov/environment/VWSettlement</u>. Funding requests submitted by TDEC to the Trustee will also be made available to the public via the Trustee public website, which is accessible at <u>https://www.vwenvironmentalmitigationtrust.com/</u>. Summarized details regarding the expenditure of EMT funds by TDEC (e.g., cumulative totals for categories of eligible mitigation actions identified in the BMP, identification of recipients of EMT funds and their project scopes) will be maintained on the TDEC webpage. Documentation and records supporting all expenditures of the EMT funds by TDEC will be made publicly available. The general public may request such information by submitting a records request to TDEC. Specific request instructions are provided on the TDEC webpage, including the name, title, and contact information for the TDEC staff tasked with responding to such records requests. By submitting an application for a grant, applicants agree to allow the use of applicant and project information as provided in application and grant documents to be published or distributed in various print or electronic media publications.

- TDEC is required by Tenn. Code Ann. § 4-3-514(b)(1) to "maintain the confidentially of all proprietary information it may acquire." Proprietary information is defined in Tenn. Code Ann. § 4-3-514(b)(2) 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." Applicants for and/or recipients of funding from the VW EMT shall identify any proprietary information in submitted documents. TDEC will review all submitted information to determine whether it contains any proprietary information. Further, TDEC will maintain a log of the documents that contain proprietary information in order to ensure that such is redacted prior to being produced in response to a records request or disseminated for other purposes.
- The application is also subject to the State of Tennessee's applicable laws governing the
 public disclosure of personally identifiable information, which are set forth in Tenn. Code
 Ann. §10-7-504(a)(29). Pursuant to Tenn. Code Ann. § 10-7-503(a)(5), "information made
 confidential by State law shall be redacted whenever possible, and the redacted record shall
 be made available for inspection and copying."
- TDEC reserves the right to not award funds to applicants that have:
 - Failed to submit a complete application;
 - Exhibited poor performance in complying with the expectations and requirements of previous grant contracts with the State of Tennessee; or
 - Regulatory and/or programmatic compliance issues with the State of Tennessee (e.g., is not in compliance with current regulations enforced by TDEC).
- The applicant shall certify that:
 - The applicant understands that the elements of Title VI compliance correspond to requirements for Title VI as provided for in 42 U.S.C. § 2000(d) and in Tenn. Code Ann. § 4-21-904; that the applicant has either adopted and implemented these elements of compliance or has agreed to adopt and implement TDEC's compliance resources as its own; and that the applicant understands that the applicant's eligibility for funding is contingent upon its satisfaction of and adherence to the requirements of Title VI, as well as any contractor or subcontractor associated with the project as required by law;
 - The applicant has successfully submitted and received notification of completion for its annual Title VI Compliance application;
 - The applicant understands that if the applicant is awarded a grant by TDEC, the applicant will need to show evidence of completion of Title VI training when requested by TDEC;
 - The applicant has read and understands the reporting requirements and that the

applicant will comply with these requirements;

- All vendors will be selected in accordance with State public contracting laws under Tenn. Code Ann. Title 4, Chapter 56; Title 12, Chapter 3; and Title 12, Chapter 4; and
- The applicant, along with the officers, directors, owners, partners, employees, or agents of the applicant organization, is (are) not presently debarred, suspended, proposed for debarment, or declared ineligible for an award by any State or Federal agency.
- TDEC may terminate and cancel this Program at any time.

APPLICATION EVALUATION:

TDEC will conduct a comprehensive review of all complete and eligible grant applications, including all required supporting documentation (see the list of required supporting documentation in the Application Requirements section below). Applications will be evaluated based solely on the data provided; therefore, completeness and accuracy are important. Each applicant is responsible for submitting all relevant, factual, and correct information with its application. Funding will be awarded based on the merits of the applications. Please note that TDEC may select parts of a proposal for funding and may offer to fund less than the eligible grant amounts or a smaller amount than requested in the application.

In addition to the above-mentioned criteria, projects will be evaluated, in part, on the following additional criteria:

- Proposed locations and availability of amenities (e.g., restrooms, dining options, etc.);
- Safety features of the proposed site (e.g., overhead lighting, on-site security personnel, video surveillance system, emergency call button, canopy, etc.)
- Level of anticipated electrical upgrades needed;
- Site features (e.g., pull-through charging design, inclusion of NACS (J1772) ports or adaptors, etc.);
- Cost-effectiveness of the project;
- Distance from the prioritized corridor; and
- Additional benefits to be achieved as a result of the project, including whether the project will strengthen emergency preparedness and resiliency of the transportation sector through diversity of fuel and project types (e.g., solar-assisted charging infrastructure with onsite energy storage).

APPLICATION REQUIREMENTS:

Applicants must complete and provide the items listed below within the grant application. Please note that projects may be determined to be incomplete and ineligible for an award if the information provided in the application does not include all of the following supporting documentation. Details for completing these items are provided in this Application Manual.

• Applicants must complete and submit the State of Tennessee Volkswagen Diesel Settlement Environmental Mitigation Trust Fast Charge TN Network Grant Application, accessible at <u>https://tdec.smartsimple.com/</u>.

- The application must state the intent of the applicant and all project partners to:
 - Maintain operations in Tennessee for a minimum of five years;³
 - Comply with related Title VI requirements;
 - Comply with reporting requirements;
 - o Comply with program income requirements; and
 - Comply with the requirement that all vendors will be selected in accordance with State public contracting laws.

Supporting Documentation:

In addition to completing the application, applicants must:

- For each site, detail the proposed number of charging stations to be purchased and installed (refer to the definition of a "charging station" outlined within Appendix A Program Guidelines.)
- If applicable, detail any services expected to be provided by third-party vendors (e.g., site selection, design, engineering, installation, commissioning, etc.).
- Whether the project will utilize onsite energy generation, including solar photovoltaics and/or battery storage.
- Detail the total grant amount requested (up to \$150,000 per charger to be purchased and installed) and corresponding cost share amount (at least 20% of the total project cost).
- Provide a letter of financial commitment from each expected cost share contributor. Each letter shall state the amount and source of funds to be contributed to the project.
- Verify that its organization has successfully submitted its annual Title VI Compliance application and has received notification of completion. The annual Title VI Compliance application requires the following:
 - Demographic data from the U.S. Census;
 - The applicant's non-discrimination policy;
 - The applicant's limited English proficiency plan;
 - A copy of the applicant's Title VI training program; and
 - A copy of the applicant's procedures for reviewing Title VI complaints.

For questions regarding the annual Title VI Compliance application or to check on the status of an application, please contact <u>TDEC.Grants@tn.gov</u>. For questions specific to Title VI requirements, please contact <u>TDEC.TitleVI@tn.gov</u>.

• Though not required, applicants are also **strongly encouraged** to develop and attach a cybersecurity plan that demonstrates how the proposed charging site will be protected against cyber attacks and how the Grantee will ensure the availability, continuity, and integrity of the charging infrastructure. Plans should detail how the Grantee will proactively address risks to cybersecurity and consumer privacy and prevent harm to the hardware, customers, network, or power grid. <u>A cybersecurity plan template</u>, initially developed for use through the Tennessee Department of Transportation's Tennessee Electric Vehicle Infrastructure Program, may be used to inform applicant cybersecurity plans.

GENERAL GRANT AND CONTRACT CONDITIONS:

³ Applicants selected to receive grant funding will be required to submit annual reports for a period of five years following fast charging equipment procurement, delivery, installation, and commissioning.

- Applicants are required to attend a virtual application workshop prior to application submission, either by participating during an initial application workshop webinar session or by watching a recorded version of the application workshop webinar (to be posted on TDEC's Fast Charge TN Network webpage at <u>www.tn.gov/EVfastcharge</u>). The application workshop will provide guidance on the application process and program terms and conditions, including project eligibility, timelines for implementation, and reporting requirements.
- Projects selected for funding will receive a letter addressed to the contact person specified in the application.
- After the announcement of a grant award, TDEC will forward a grant contract to the recipient. Grantees will be required to execute (sign) the grant contract, which will include a detailed scope of work, project schedule, budget, and other information.
- Grantees will be required to obtain a vendor identification number and will need to submit a Form W-9, Request for Taxpayer Identification Number and Certification. Grantees will also be required to submit bank information via an original automated clearing house (ACH) form in order to receive grant reimbursements electronically. The ACH form must be signed by an authorized account representative and a representative of the associated financial institution.
- As noted above, procurement of eligible EV fast-charging infrastructure, operational and maintenance costs purchased upfront, including maintenance services and network fees, and related support services (e.g., engineering and design, site identification and qualification, hardware installation, commissioning, etc.), shall be made on a competitive basis, including the use of competitive bidding procedures, where practical. In each instance where it is determined that use of a competitive procurement method is not practical, supporting documentation shall include a written justification for the decision and for use of a non-competitive procurement. The Grantee shall obtain prior approval from the State before making any purchases under the grant contract. All vendors will be selected in accordance with State public contracting laws under Tenn. Code Ann. Title 4, Chapter 56; Title 12, Chapter 3; and, Title 12, Chapter 4.
- TDEC will make payment to the Grantee based on review of reimbursement requests detailing eligible costs with accompanying invoices, actual costs at time of purchase, and documentation of charging infrastructure installation and operability. TDEC will not fund costs in excess of the requested grant amount.
- Grantees will be reimbursed for costs incurred by the Grantee only during the grant contract term.
- Reporting:
 - The Grantee must submit quarterly reports with updates on site selection, site host agreement negotiation and execution, environmental review, site design and engineering, and procurement of equipment and services until the project has been completed (i.e., grant-funded charging infrastructure is installed and commissioned). Such reports shall include a complete description of the status of the project (including actual or projected termination date), development, implementation, and any modification.⁴ Quarterly reports shall be due **no later than January 10, April 10**,

⁴ Beneficiaries of the EMT are required to submit this information to the Trustee for each EMA. Beneficiary reporting obligations are outlined in Section 5.3 of the State Trust Agreement. https://www.tn.gov/content/dam/tn/environment/energy/documents/vwresources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020. pdf.

July 10, and October 10 of each year of the grant contract term.

- Grantees will be required to submit annual reports for a period of five years following infrastructure installation and commissioning. The deadline for submitting these reports shall be established by the Program following commissioning. Annual reports shall include, at a minimum, the following information:
 - a. Station usage (number of charging events, duration of each charging event, start and stop time of each charging event, amount of electricity dispensed at each charging event in kWh, fees collected for each charging event, aggregate amount of electricity dispensed over the reporting period in kWh, aggregate fees collected over the reporting period, and station downtime in hours per year as well as calculated as a percent (e.g., 175 hours or 2% downtime)). Where possible, Grantees should also allow the State "view access" to the charging network to allow for automated monitoring of station usage;
 - b. Program income (gross income or revenue from charging fees less program expenses, such as the cost of electricity) generated over the reporting period;
 - c. Internal accounting controls and mechanisms to be used by the Grantee to ensure that all such program income is reinvested in or used to defray ongoing costs of the project; and
 - d. An explanation of program income expenditures during the reporting period (e.g., the amount of program income generated and how such program income has been reinvested in or used to defray ongoing costs of the project).
- Grantees must submit a final project report within three months of the completion of the grant contract term. (Please note that this report may be combined with the annual report for the final year of the grant contract term.) In addition to the information requested for the annual report, the final project report must also include cumulative financial information to match the final reimbursement request as well as inventory documentation for all equipment purchased with funding through the grant contract. The inventory documentation must include, at a minimum, the following:
 - a. Description of the equipment;
 - b. Manufacturer's serial number or other identification number, when applicable;
 - c. Consecutive inventory equipment or identification;
 - d. Acquisition date, cost, and check number;
 - e. Fund source, State grant number, or other applicable fund source identification;
 - f. Percentage of state funds applied to the purchase;
 - g. Location within the Grantee's operations where the equipment is housed;
 - h. Condition of the property or disposition date if Grantee no longer has possession;
 - i. Depreciation method, if applicable; and
 - j. Monthly depreciation amount, if applicable.
- Failure to submit quarterly, annual, or final reports may result in the required refund of any or all payments made to the Grantee by the State.
- The Grantee will use quarterly, annual, and final report templates provided by TDEC. These templates will be referenced in the grant contract and will be attached to the

corresponding grant program manual.

• The Grantee will be responsible for providing all the information required to complete the reports.

Report Type	Due Date	Contents	
Quarterly		Site progress, contracting, permitting,	
Report	Jan 10, Apr 10, Jul 10, Oct 10	procurement	
Appual Depart	1 y por year after commissioning	Station usage, program income, O&M	
Annual Report	Tx per year after commissioning	costs	
Final Danart	2 months post contrast	Cumulative financials + equipment	
Final Report	3 months post-contract	inventory	

- TDEC will oversee the project activities performed under the grant contract. Oversight activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance; temporary intervention in unusual circumstances to address deficiencies that develop during the project; assuring compliance with grant contract terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.
- Accounting and Financial Controls:
 - Grantees must properly manage and account for funding received. A complete spending record for all expenditures will be required, including invoice receipts, logs of record, and other properly certified documents.
 - Only purchases made within the period of performance of a fully executed and approved grant contract shall be eligible for reimbursement. No credit will be given for costs incurred prior to the grant period of performance. Documentation will be required for all funds requested. Any applicant who starts a project and incurs costs before receiving a fully executed grant contract does so at its own risk.
 - All funding must be spent in accordance with the grant contract.
 - TDEC reserves the right to terminate the grant contract and/or recover funding from Grantees that TDEC determines are not in compliance with the conditions of this solicitation or the grant contract.
 - TDEC will not automatically grant project extensions. Requests for extensions will be evaluated on a case-by-case basis.
 - TDEC reserves the right to monitor projects and to audit any Grantee's financial transactions or compliance with the grant contract.
- Public Notice: TDEC encourages Grantees to publish or otherwise make publicly available the results of work performed and vehicle purchases made under grant contracts. All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by Grantees in relation to a grant contract should include the statement, "This project was funded in part under a grant contract with the State of Tennessee's Department of Environment and Conservation, under the State of Tennessee Volkswagen Diesel Settlement Environmental Mitigation Trust Fast Charge TN Network Grant Program."

DEFINITIONS:

The following definitions are set forth in Appendix D-2 of the State Trust Agreement:⁵

"All-Electric" shall mean powered exclusively by electricity provided by a battery, fuel cell, or the grid.

"*Infrastructure*" shall mean the equipment used to enable the use of electric powered vehicles (e.g., electric vehicle charging station).

"*Zero Emission Vehicle (ZEV)*" shall mean a vehicle that produces no emissions from the onboard source of power (e.g., All-Electric or hydrogen fuel cell vehicles).

TDEC has developed additional definitions for purposes of administering this Program, including definitions provided in Appendix 4 – Additional Defined Terms of the State's VW Settlement Beneficiary Mitigation Plan⁶:

"Grantee" shall mean an applicant that has an executed grant contract with TDEC.

"Operation and Maintenance Costs" shall mean the costs necessary for, and directly connected to, the operation and maintenance of new light duty electric vehicle supply equipment, which may include, but are not limited to, electricity consumption and/or demand charges, grid access charges, network fees, repairs, and the purchase and installation of Power Supply Equipment for the specific purpose of generating electricity for, storing electricity for, and/or delivering electricity to the light duty electric vehicle supply equipment.

"**Power Supply Equipment**" shall mean equipment or infrastructure used for generation, storage, and/or delivery of electricity for the operation of light duty electric vehicle supply equipment, which may include, but is not limited to, devices for traditional connection to the electric grid, stationary storage batteries, non-grid tied solar photovoltaic panels, and other equipment or infrastructure associated with the powering of light duty electric vehicle supply equipment (or analogous successor technologies).

⁵ State Trust Agreement, App'x D-2, <u>https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/Modified_Environmental_Mitigation_Trust_Agreement_for_State_Beneficiaries_Effective_June_18_2020.pdf.</u>

⁶ State of Tennessee VW Settlement Beneficiary Mitigation Plan,

https://www.tn.gov/content/dam/tn/environment/energy/documents/vw-resources/TDEC_VW_EMT_BMP_Updated_7.19.22.pdf

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 Mark Finlay, Office of Energy Programs Davy Crockett Tower, 9th Floor 500 James Robertson Parkway Nashville, TN 37243 <u>TDEC.OEP@tn.gov</u> Phone: 615-772-6011

APPENDIX A – PROGRAM GUIDELINES

Fast Charge TN Network Program Guidelines

Tennessee Valley Authority (TVA)

 $\quad \text{and} \quad$

Tennessee Department of Environment and Conservation (TDEC)

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Site Selection Guidelines

Proximity to Corridor

• Fast charging sites should be located within one driving mile of the corridor they support (e.g., at an interstate exit or directly off the highway). At a maximum, sites must be no further than five driving miles from the corridor.

Signage and Site Visibility

- As the electric vehicle driver may be unfamiliar with the area, charging sites should be visible and easy to find. Signage on the host property can help draw attention to the charging stations and, if possible, local "wayfinding" signage can direct drivers from the corridor to the charging site.
- The host site should offer ample space for vehicle traffic so that drivers can comfortably enter the lot and locate the charging station.

Access to Power

- Locating the charging site near an existing power supply is a key step in limiting the overall cost of the installation. Most fast charging stations utilize 480 volt three phase power (although single phase options do exist integrating energy storage systems).
- Assessing the location and capacity of electrical distribution equipment, including transformers, located near desirable corridor exits is also a key step in the site selection process.
- To keep trenching costs low, minimize the distance from electrical distribution equipment to the charging station.
- If utilizing the TVA wholesale electric vehicle rate, charging stations must be separately metered from the host business in order to isolate energy utilized for charging. Consider accessibility of the electrical equipment as well as the charging site electrical meter.

Site Amenities and Safety Features

- Charging stations must be located at a host site that supports 24 hours / 7 days a week public access at no cost for entry. Basic safety features such as ample lighting, on-site personnel, and other features that make the electric vehicle driver feel secure are also critical considerations.
- A fast charging experience is distinguished from a typical retail gas station stop by the length of time required. Some fast charging sessions will require 20 to 30+ minutes to complete. Given the charging time involved, on-site access or "walking distance" access to bathrooms, retail shopping, food and dining options, local attractions, and other amenities is highly desired.
- Reliable cellular network access is important. Most charging stations use cellular modems to connect to network management systems for various functions such as payment processing and monitoring. Identifying cellular signal strength at a potential site and which carrier serves that particular location can help charging station companies ensure the appropriate equipment is included.

Environmental Impact

• In general, ideal charging sites with access to amenities and other features will be located in previously developed areas (e.g., existing parking lots). Therefore, the potential impact to the surrounding environment should be minimal. However, during site selection, pay attention to the potential impacts of removing trees, impacting stormwater run-off / drains, or altering nearby wetlands and animal habitats. A completed **Environmental Review Checklist** must be reviewed and approved before construction can begin.

Host Site

• The site host (property owner) will serve as a business partner in operating the fast charging station. Local power company owner/operators of charging stations may rely on the site host for various operating needs, such as a limited degree of customer service. Look for site owners and businesses that are professionally operated, well-established, and interested in partnering to serve electric vehicle drivers.

Charging Station Site Layout and Accessibility

- A site with two charging stations could require a "footprint" up to approximately 36' x 20' (approximately four normal size parking spots) depending on layout design and incorporation of Fast Charge Network Program **Accessibility Requirements**. It is important that sites have enough space now and can accommodate future expansion. The site should also be appropriately zoned for commercial activities.
- Charging stations should be located away from potential hazards including excessive traffic and industrial activity. Local authorities may have minimum distance requirements for electrical equipment like electric vehicle charging stations, requiring such to be located a safe distance away from ignition sources such as gas pumps or underground storage tanks.
- If possible and practical, consider site layouts that allow "pull through" access much like gas pump setups. This allows larger vehicles and vehicles with trailers to charge without backing-in or having to disconnect trailers.
- Charging sites must be accessible to people with limited mobility, such as individuals who utilize wheelchairs. Avoid locations with steep grades, stairs, and tall curbs. Refer to the Fast Charge Network Program **Accessibility Requirements** for exact specifications.
- Avoid placement of charging stations where cords could create tripping hazards and consider whether nearby landscaping will interfere with the charging stations or parking spaces.

Potential Future Expansion

- Always develop charging sites with future expansion in mind. Electric vehicle adoption is forecasted to grow substantially in the coming years as is the need for fast charging stations.
- In addition to the available site area, future expansion applies to sizing of electrical distribution equipment including transformers, concrete pads, electric panels, disconnects, size and number of conduit installed, etc.

Environmental Review

Grantees will be required to complete an **Environmental Review Checklist** of their chosen site, to be provided by their respective funding partner. As an example, TVA's environmental review checklist is included in this document. TDEC will share its environmental review checklist once grantees are selected (following submission of the Notice of Intent form). The completed checklist must be reviewed and approved by the grantee's funding partner before construction can begin.

TVA Environmental Review Checklist

The goal of this program is to develop electric vehicle charging stations with minimal impact to the surrounding environment. TVA will review this environmental checklist and follow up with the Program Participant as appropriate, in accordance with TVA's legal and policy requirements associated with this program. Please provide the following information to TVA program management staff via email (<u>agfrye@tva.gov</u> and copy <u>dcarter6@tva.gov</u>) before any construction activities begin, for final environmental review and charging site approval.

Local Power Company (Program Participant): _____

Proposed Charging Site Address (or lat/long): _____

In general, if the proposed electric vehicle charging site is located within previously developed areas, such as: parking lots, gas stations, recently graded land, sites situated on fill material, or other similar low impact situations; and associated activities such as installation of signage, construction of new utility distribution poles or underground utilities, etc. are completely within previously disturbed areas, additional review is not likely required.

If the answer to any question below is YES, further review of environmental impacts by TVA or by the Program Participant, as directed by TVA, <u>may be required</u>. If the answer to any question is YES, consider locating another site that avoids these potential impacts and reach out to TVA to understand additional review responsibilities and costs.

[] Yes [] No	Is the proposed charging site located within the 100-year floodplain as shown on <u>FEMA Flood</u> <u>Insurance Rate Maps</u> ?
[] Yes [] No	Is the proposed charging site located within the 500-year floodplain of a TVA reservoir, or where TVA owns property or a flowage easement?
[] Yes [] No	Will development of the charging site require the removal of trees greater than three inches in diameter measured at breast height or any forest clearing?
[] Yes [] No	Will development of the charging site require filling in of wetlands or streams, or filling in streamside management zones?
[] Yes [] No	Will development of the charging site require ground disturbances (ex. new utility poles) outside of existing developments such as parking lots, roadways, buildings, or other impervious surfaces and/or outside of previously disturbed land (ex. greenfield)?
[] Yes [] No	Will development of the charging site result in impacts to caves, sinkholes, streams, or wetlands?
[] Yes [] No	Will development of the charging site require demolition of an existing structure?
[] Yes [] No	Is the proposed charging site located on the same property as, or adjacent to, a structure 50 years old or greater?
[] Yes [] No	Is the charging site located within a zoned historic district with the National Register of Historic Places?
[] Yes [] No	Is the charging site located on property owned by a federally recognized Indian tribe?

*Please attach pictures showing the proposed charging site and surrounding environment; including the top of nearby utility poles, lights, or other tall structures adjacent to the proposed charging site.

This form must be completed and signed by an authorized representative or agent for the Program Participant, an individual who can certify, under penalty of law, and based on information and belief formed after reasonable inquiry and appropriate training or licensing, that the statements and information contained in this Environmental Review Checklist are true, accurate and complete.

Program Participant Representative (Signature):	Date:
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Minimum Technical Specifications

With regard to the use of terminology (charging station, charger, site, location, plug, and port), please reference Figure 1 below.





Charging Station and Charging Site <u>Minimum Technical Specifications</u>

Unless otherwise agreed upon, the following specifications must be met in order to qualify for reimbursement under the Fast Charge Network Program:

- Each charging <u>site</u> must have at minimum two charging stations; up to four charging stations is allowable under this program if authorized by the authorizing agency.
 - If only two charging stations are installed initially, the site should be easily expandable to accommodate four charging stations in the future.
 - For program reimbursement purposes, a "charging station" is defined as an electrical device capable of charging a single electric vehicle. If a device is capable of charging two electric vehicles simultaneously, it will be considered two charging stations; however, the ability to charge two vehicles alone may not meet all charging site specifications (see plug type specifications and illustrative examples below).
- At the very minimum, each charging <u>site</u> must be capable of delivering at least 120kW to a single vehicle (assuming the vehicle is capable of accepting such power input). Power sharing equipment is acceptable.
- Each charging <u>site</u> must have the ability to charge at least two combined charging standard "CCS" plug vehicles (e.g., two Chevy Bolts) simultaneously while supplying at least 50kW to each.
- Provided that the required minimum of two CCS ports are met, Grantees may propose projects that include additional charging port standards, such as the American Charging Standard (NACS) and CHAdeMO.

- Charging stations capable of delivering higher power charging ~150-180+kW or upgradability / expansion capabilities to these power levels in the future is highly desirable.
- Charging stations should support electric vehicles with nominal 400Vdc up to 900+Vdc battery architectures.
- Charging stations must meet relevant technical and/or safety standards, including but not limited to UL 2202, and Code of Federal Regulations, Title 47, Part 15 (47 CFR 15), and must have valid certification(s) from a Nationally Recognized Testing Laboratory (NRTL).
- It is desirable that charging stations include or be able to be upgraded in the future to support ISO 15118 "Plug & Charge" capabilities.
- Charging stations must be capable of utilizing Open Charge Point Protocol (OCPP) V1.6 or newer for communications to various network back-ends (i.e., the system must be able to "default" to OCPP for basic functionality).
- Charging stations must be connected to an operating network and must have the ability to switch between OCPP networks.
- Charging stations must support continuous operations even when network connectivity is not available or consumer cell phone service is not available (i.e., "default on" with loss of network).
- Charging stations must be accessible to "walk up" consumers. This means that consumers must be able to initiate a charge session without a prior membership or network interaction in a simple, straightforward process.
- Charging stations and network system must include multiple payment options for drivers (including the ability to pay with a credit card, at a minimum).
- Charging stations and network system must follow cyber security and data privacy best practices, including but not limited to:
 - Payment methods must follow the Payment Card Industry Data Security Standard (PCI DSS);
 - Ability to furnish SOC II Type II report or ISO 27001 certificate;
 - \circ $\;$ End-to-end encryption with all data encrypted in transit and at rest; and
 - GDPR/CCPA for data protection and privacy.
- Charging stations and network system must provide 24/7 customer service and support.
- Any operating network system for a charging station must follow network "roaming" best practices established by the Open Charge Point Interface (OCPI) protocol.
- Any operating network system must be capable of network uptime of 98% or greater.
- Any operating network system must proactively monitor charging stations for maintenance needs and notify/dispatch for corrective action as issues are identified.

Illustrative Examples vs. Minimum Specifications

Example: Single vehicle charging stations



- \checkmark Min. two vehicles charging at same time
- Min. 120kW possible
- ✓ Min. 50kW to each vehicle
- Charge two CCS plug vehicles
- Counts as "<u>two</u> charging stations" for reimbursement purposes because two vehicles can charge at the same time

Example: Single vehicle charging stations (different power levels)



- Min. two vehicles charging at same time
- Min. 120kW possible
- Min. 50kW to each vehicle
- Charge two CCS plug vehicles
- Counts as "<u>two</u> charging stations" for reimbursement purposes because two vehicles can charge at the same time



Example: Power sharing between two charging stations

Example: Single Dual Charging Station

CHAdeMO Plug



Charges two vehicles simultaneously 60 - 120 kW

- Min. two vehicles charging at same time
- ✓ Min. 120kW possible
- Min. 50kW to each vehicle
- X Charge two CCS plug vehicles

 Counts as "<u>two</u> charging stations" for reimbursement purposes because two vehicles can charge at the same time, but unit alone does NOT meet site minimum specifications 120 kW Shared

Example: Multiple Dual Charging Stations



CHAdeMO Plug CCS Plug

Charges two vehicles simultaneously 60 - 120 kW



Charges two vehicles simultaneously 60 - 120 kW

Min. two vehicles charging at same time

- Min. 120kW possible
- Min. 50kW to each vehicle
- Charge two CCS plug vehicles

 Counts as "<u>four</u> charging stations" for reimbursement purposes because four vehicles can charge at the same time

Example: Multiple Dual Charging Stations (CCS/CCS & CCS/CHAdeMO plugs)

120 kW Shared between plugs



Charges two vehicles simultaneously 60 - 120 kW

120 kW Shared between plugs



Charges two vehicles simultaneously 60 - 120 kW

- Min. two vehicles charging at same time
- ✓ Min. 120kW possible
- ✓ Min. 50kW to each vehicle
- Charge two CCS plug vehicles

 Counts as "<u>four</u> charging stations" for reimbursement purposes because four vehicles can charge at the same time

Enhanced Technical Specifications

With regard to the use of terminology (charging station, charger, site, location, plug, and port), please reference Figure 1 below.





Charging Station and Charging Site <u>Enhanced Technical Specifications</u>

The following specifications must be met in order to qualify for **Enhanced Technical Specifications** under the Fast Charge Network program:

- Each charging <u>site</u> must be **within one mile of the interstate or highway** unless a discretionary exception has been granted.
- Each charging <u>site</u> must have at **minimum two 150kW charging stations** (four 150kW charging stations encouraged).
- Each charging <u>site</u> must have minimum power capability at or above 300kW and supports at least 150kW per port simultaneously across at least two ports for charging.
- Power sharing across ports and/or charging stations is permitted so long as it does not reduce the output per port below 150kW.
- Each charging <u>site</u> must have the ability to charge at least two combined charging standard "CCS" plug vehicles (e.g., two Chevy Bolts) while supplying at least 150kW to each.
- Provided that the required minimum of two CCS ports are met, Grantees may propose projects that include additional charging port standards, such as the American Charging Standard (NACS) and CHAdeMO.
- Sites capable of delivering higher power charging ~180-350+kW or upgradability / expansion capabilities to these power levels in the future is highly desirable.
- Charging sites capable of being easily upgraded / expanded to support at least four 150kW charging stations is highly desirable.
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- Charging stations should support electric vehicles with nominal 400Vdc up to 900+Vdc battery architectures.
- Charging stations must meet relevant technical and/or safety standards, including but not limited to UL 2202, and Code of Federal Regulations, Title 47, Part 15 (47 CFR 15), and must have valid certification(s) from a Nationally Recognized Testing Laboratory (NRTL).
- It is desirable that charging stations include or be able to be upgraded in the future to support ISO 15118 "Plug & Charge" capabilities.
- Charging stations must be capable of utilizing Open Charge Point Protocol (OCPP) V1.6 or newer for communications to various network back-ends (i.e., the system must be able to "default" to OCPP for basic functionality).
- Charging stations must be connected to an operating network and must have the ability to switch between OCPP networks.
- Charging stations must support continuous operations even when network connectivity is not available or consumer cell phone service is not available (i.e., "default on" with loss of network).
- Charging stations must be accessible to "walk up" consumers. This means that consumers must be able to initiate a charge session without a prior membership or network interaction in a simple, straightforward process.
- Charging stations and network system must include multiple payment options for drivers (including the ability to pay with a credit card, at a minimum).
- Charging stations and network system must follow cyber security and data privacy best practices, including but not limited to:
 - Payment methods must follow the Payment Card Industry Data Security Standard (PCI DSS);
 - Ability to furnish SOC II Type II report or ISO 27001 certificate;
 - End-to-end encryption with all data encrypted in transit and at rest; and
 - GDPR/CCPA for data protection and privacy.
- Charging stations and network system must provide 24/7 customer service and support.
- Any operating network system for a charging station must follow network "roaming" best practices established by the Open Charge Point Interface (OCPI) protocol.
- Any operating network system must be capable of network uptime of 98% or greater.
- Any operating network system must proactively monitor charging stations for maintenance needs and notify/dispatch for corrective action as issues are identified.

Illustrative Examples vs. Enhanced Specifications

Example: Single vehicle charging stations



Example: Single vehicle charging stations

 Counts as "<u>four</u> charging stations" for reimbursement purposes because four vehicles can charge at the same time

- Min. two vehicles charging at same time
- Min. 150kW to each vehicle at the same time
- Charge two CCS plug vehicles
- Counts as "<u>two</u> charging stations" for reimbursement purposes because two vehicles can charge at the same time

- Min. two vehicles charging at same time
- Min. 150kW to each vehicle at the same time
- Charge two CCS plug vehicles



Fast Charge TN Network Program Guidelines



Example: Power sharing between four charging stations

- Counts as "<u>four</u> charging stations" for reimbursement purposes because four vehicles can charge at the same time
- Min. two vehicles charging at same time
- Min. 150kW to each vehicle at the same time
- Charge two CCS plug vehicles



Example: Single Dual Charging Station



Example: Multiple Dual Charging Station



Fast Charge TN Network Program Guidelines



Americans with Disabilities Act (ADA)

The information contained in this section is for general information purposes only and does not, and is not intended to, constitute legal advice. A signatory to an Electric Vehicle Fast Charger Program Agreement or Grant Contract with responsibility for purchasing and installing the electric vehicle (EV) charging stations (for purposes of this section, "Program Participant") should consult with the Program Participant's legal advisor regarding the applicability of the ADA or any state accessibility requirements to EV charging stations. Each signatory to an Electric Vehicle Fast Charger Program Agreement or Grant Contract with responsibility for reimbursing certain Program Participant project costs (for purposes of this section, "Funding Agency") disclaims any liability for any actions or omissions of Program Participants based on the contents of this section.

It is the responsibility of each Program Participant to consult the Program Participant's legal advisor to determine whether the Program Participant's publicly-accessible EV charging stations may be subject to current requirements of the ADA and any state accessibility requirements and, if so, what steps the Program Participant must take to ensure compliance. While participation in the Fast Charge Network Program requires that the Program Participant meet accessibility requirements, described below, the Funding Agency does not warrant that meeting the Accessibility Requirements required by the Fast Charge Network Program, including any approved Accessibility Deviation Request, satisfies the requirements of the ADA or any state accessibility requirements. The Funding Agency will not be liable for failure of the Program Participant to comply with any ADA or state accessibility requirements. As a reference only, the ADA statutory language can be viewed here and here and a guidance on standards can be viewed here.

Fast Charge Network Program Accessibility Requirements

To provide accessibility, each Program Participant must, as a requirement of the Fast Charge Network Program, include at least one van-accessible EV charging stall (EVCS) at each Fast Charge site that meets the following requirements ("Accessibility Requirements"). These requirements were developed in consultation with the Tennessee Department of Transportation's (TDOT) Roadway Design Division.

- Total stall width, including both access aisles, shall be a minimum of 252"
- Parking stall min. width: 96"
- Stall min. length: 216"
- Access aisles:
 - Access aisle with 60" min. width must be located along one side of EV charging stall, be the same length as the stall(s) it serves, and connect to an accessible route to the charging station. It is preferable, but not required, to locate this 60" aisle adjacent other EV charging stalls
 - Access aisle with 48" min. width must be located along opposite side of EV charging stall, be the same length as the stall(s) it serves, and connect to an accessible route to the charging station
 - o Boundary of the access aisle must be marked
 - o Access aisles may have 1:50 maximum slope in all directions
- Accessible path to EV charging station must be provided (wheel stops and curbs cannot be located in a manner that obstructs an accessible path to the charging station)



Refer to the example drawing of a van accessible EV charging stall. Should site or other constraints prohibit the inclusion of at least one van accessible EV charging stall meeting the Accessibility Requirements, the Program Participant must submit an *Accessibility Deviation Request* to the Funding Agency before proceeding with site installation. The Accessibility Deviation Request must include:

- 1. A written description of the site and reason for deviation from the requirement (pictures and drawings of the existing site are encouraged);
- 2. A proposed alternative which provides accessibility to persons with disabilities. A drawing or rendering of the proposed alternative, which includes stall dimensions, striping, and charging station location, is required; and
- 3. Any other information required by the Funding Agency to ensure that the proposed deviation will provide sufficient accessibility to persons with disabilities.

Upon receipt of an Accessibility Deviation Request, the Funding Agency will review the proposed alternative and may, at the Funding Agency's discretion, approve the request, deny the request, or request additional information. The Program Participant must provide all additional information requested by the Funding Agency regarding an Accessibility Deviation Request and failure to provide such information may result in denial of the request. Upon completing its review of an Accessibility Deviation Request, the Funding Agency will issue a determination in writing approving the request if the request, in the Funding Agency's sole discretion, provides an alternative for sufficient accessibility to persons with disabilities or, otherwise, denying the request. Upon approval of an Accessibility Deviation Request, the Program Participant is required to comply with the terms of the approved request instead of providing at least one van-accessible parking stall meeting the Accessibility Requirements.

APPENDIX B – PROGRAM RESOURCES

Fast Charge TN Network Program Resources

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Improving charging infrastructure availability: The Fast Charge TN Network

The Tennessee Department of Environment and Conservation (TDEC) and the Tennessee Valley Authority (TVA) have partnered to develop a statewide electric vehicle (EV) fast charging network to power the growth of EVs across Tennessee and reduce barriers of transportation electrification. Specifically, <u>the two</u> <u>have signed an agreement</u> to collaborate and fund a network of fast charging stations every 50 miles along Tennessee's interstates and major highways.



Fast Charge TN Network Overview

TDEC will leverage various funding sources to support the development of the Fast Charge TN Network. TDEC has committed 15%, the maximum allowable, of the <u>State's Volkswagen Diesel Settlement</u> <u>Environmental Mitigation Trust allocation</u> to fund *Light-Duty Zero Emission Vehicle Supply Equipment*. Initially \$5.2 million from this fund was allocated to fast charging infrastructure along corridors.



- \$5.2 million was made available under Round 1 to TVA-served Local Power Companies (LPCs) and other local utilities that distribute electricity in Tennessee whose service territory is located along prioritized corridor gaps.
- As of April 2025, TDEC has approximately \$2.3 million in additional funding to commit to the Program. In this Round 2 solicitation, eligible applicants will include local government entities, private companies, and/or non-profits .An interactive version of the corridor gap map may be accessed <u>here.</u>



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Improving charging infrastructure availability: The Fast Charge TN Network

Funding & Reimbursement

For selected, eligible projects, the program will provide up to 80% of the cost to purchase, install, operate, and maintain eligible EV charging infrastructure that will be located within a prioritized corridor gap and made available to the public. This program will not support the purchase or rental of real estate, other capital costs (e.g., construction of buildings, parking facilities, etc.), or general maintenance (i.e., maintenance other than of the EV charging infrastructure). Grantees will be required to provide at least 20% of the total project cost through direct or in-kind cost share.

This program will require selected projects to include at least two DC fast chargers at each location, with the option to request to install a maximum of four DC fast chargers per location. Additionally, requests for funding may not exceed \$150,000 per fast charger to be installed. Grantees will be responsible for finding a suitable host site and purchasing, installing, owning, operating, and maintaining programfunded fast charging equipment for a period of no less than five years.

Payment of project expenses will take place on a reimbursement basis. Reimbursement will be made following charging station completion, commissioning, and submission of supporting documentation of costs incurred. Grantees will be issued a reimbursement payment following project completion and approval of invoice(s).

Reimbursable costs include:

- Cost to purchase and install (e.g., utility make-ready) eligible EV charging infrastructure
- Support services (e.g., engineering and design, site identification and qualification)
- Operational and maintenance costs purchased upfront. including maintenance services and network fees

Non-eligible expenses include:

- The purchase or rental of real estate
- Other capital costs (e.g., construction of buildings, parking facilities, etc.)
- General maintenance (i.e., maintenance other than of the charging infrastructure)
- · Legal fees associated with land acquisition

Site Selection

Site Considerations

Charging sites must follow Site Selection Guidelines found within the Program Guidelines to ensure a positive consumer experience.

Station Proximity to Roadway

Proximity to identified corridors is one important determinant of both consumer appeal and anticipated charging station utilization.



Access

- 24 /7 availability
- Publicly accessible





Proximity to 480V, 3 phase power Future upgradability

Nearby Amenities Restaurants Shops



Secure Well-lit

Corridors Interstates Major U.S. and State highways



On-site personnel



Distance from highway <1 mile preferred

- 5 miles max
- 50 miles or less between Fast Charge
- TN Network stations

Weather Protection Shelter from elements is desirable but construction of such is not reimbursable under this program





Improving charging infrastructure availability: The Fast Charge TN Network

Installation Term

Grantees will have 15 months from the effective date of the **Contract** to complete the project. No-cost extensions will be evaluated on case-by-case basis.

Site Engineering and Design

- Complete environmental review and return the provided **Environmental Review Checklist**, which will be provided to selected grantees, for final site approval before beginning construction activities; additional information will be provided to outline necessary documentation and required information to complete this review.
- Design and construct site in accordance with **Minimum Technical Specifications,** which can be found in Program Guidelines, provided by the program.

Co-branding

To increase consumer awareness and recognizability of charging stations, a consistent visual design featuring program partner cobranding will be leveraged. Guidance on design and process will be provided by the program.

EV Rate & Pricing

- TVA's EV rate (wholesale EV Rate plus Valley-wide retail adders) is recommended, but Grantees retain rate setting flexibility for electric services.
- Consumer pricing for charging services will be set by station owners and is not regulated by TVA.

Operation & Maintenance Term

Grantees will be responsible for owning, operating, and maintaining program-funded fast charging equipment for a period of no less than five years. After termination of the contract term, property disposition requirements may apply depending on the funding source.

Site Acquisition

A site host agreement will be required to show that the Grantee has been granted access to the property where charging stations are to be installed. If a Grantee owns the property, this will be confirmed via a **Verification of Property Ownership Form** provided by the program. The purchase or rental of real estate is a non- reimbursable cost under the program.

Equipment Acquisition

Purchase and install charging stations that meet the **Minimum Technical Specifications**, which can be found in the Program Guidelines, provided by the program.

Reporting & Station Access

- Grantees will be required to report station usage (or allow "view access" to the charging network for automated monitoring and reporting) and gross income generated for a period of no less than five years.
- Reports will be due on an annual basis unless otherwise agreed upon in individual program contract.

Program Income

All program income (gross income earned by the Grantee that is directly generated by the project or earned as a result of the project funding during the contract term) must conform with program income requirements (e.g., see 2 CFR § 200.307) in that such income must be reinvested in or used to defray ongoing costs of the project (e.g., other maintenance fees).



Example Site Layouts

Below are some example site layouts that include at least one van accessible EV charging space. These layouts are provided as a resource. While there are additional layouts that include at least one van accessible EV charging space, these examples fit within traditional parking space layouts and allow maximum flexibility for larger electric vehicles such as pickup trucks and SUVs. More information on the program requirement to include at least one van accessible EV charging space can be found in the program **Accessibility Requirements**.











Charging Site Development and Operation Best Practices

Developing and operating an electric vehicle (EV) fast charger site is a multi-step, multi-stakeholder process that requires thoughtful planning and execution. Planning in advance can help avoid surprises, streamline timelines, and better manage costs. There are several detailed "Best Practices" resources from various organizations such as <u>EPRI</u>, <u>SEPA</u>, and <u>NYSERDA</u> that can be leveraged. Below are topics that should be considered prior to installing EV charging stations.

Initial Planning:

- Successful infrastructure programs should invest a considerable amount of time in the planning phase.
- Familiarize yourself with EV fast charger technical specifications (typically 480V, three phase power, and 120+ kW for each location, but standards allow power levels up to 350kW per car). For the Fast Charge Network program, please reference the **Minimum Technical Specifications** document found within the **Program Guidelines**.
- Identify local travel corridors, such as interstates and major U.S. and state highways, and determine which of these routes currently have charging options.
- Consider areas of the distribution grid with known constraints or optimal areas (capacity) for hosting fast charger loads.
- Identify and engage relevant project partners early in the process, such as local government officials, third-party service providers, etc.
- Interface with local permitting authorities to understand local permitting requirements and specific codes associated with developing a charging site in your area.
- Consider specific legal requirements and terms you will want to include in a site host agreement with the site owner to secure a host property where chargers will be located.

Site Identification, Review, and Selection:

- Identify a list of potential target sites for hosting charging stations.
- Identify multiple potential sites, as some sites may pose challenges (e.g., conflicts with site host contracting, costs of electric infrastructure, environmental considerations, etc.). Refer to **Site Selection Guidelines**, which can be found in the **Program Guidelines**, for additional details.
- Perform high-level feasibility reviews of potential sites prior to committing significant time and resources into the project.
- Once you have a short list of potential sites, perform site surveys for prioritized site locations.
 - Identify where power will come from and where equipment such as transformers and switch gear will be placed.
 - Note the layout of parking spaces and whether any will need to be expanded or removed. If possible, select the widest and longest parking spaces to support easy access for drivers.
 - Consider potential issues relating to accessibility, including wheelchair accessibility (more on this topic is included below within the design section).
 - Take note of potential safety risks, such as steep drops or trip hazards.
 - Consider environmental impacts of site development. The Environmental Review Checklist, which can be found in the Program Guidelines, details items to consider. In general, locating charging sites within previously developed areas such as existing parking lots greatly reduce potential impacts.
 - Identify cellular signal strength and the cellular carriers that best service a particular location. Reliable cellular network access is important to connect charging stations to network management systems, including payment processing and monitoring.



Site Design, Permitting, and Accessibility

- Determine the number and type of charging stations and electrical equipment needed.
 - The Minimum Technical Specifications, which can be found in the Program Guidelines, for corridor Fast Charge Network locations document detail minimum number of chargers, minimum power levels/charging speeds, etc.
- Evaluate design and construction requirements.
 - Determine what is required to bring electrical service to the site, place transformers, and connect charging stations.
 - Trenching through pavement may be necessary but should be minimized to save costs.
 - Consider how to integrate landscaping into the project. The location and type of landscaping in a parking facility helps to define vehicle and pedestrian movement and enhance visual design by hiding electrical support equipment.
 - Third-party service providers may be helpful during the design process.
- Determine additional site needs.
 - Signage and surface marking (e.g., striping, painting the parking spot, etc.) should be clearly visible to tell drivers where the chargers are and to delineate designated parking spaces, restrictions, etc.
 - Safety and security must be considered such as lighting and proximity to publicly available amenities.
- Public charging stations must enable access for persons with disabilities and follow all federal ADA requirements.
 - For the Fast Charge Network program, at least one van-accessible electric vehicle charging space will be required. This will provide adequate space to move a wheelchair or other equipment in and out of a wheelchair accessible van and allow wheelchair access to plug in common electric vehicles. Please refer to the Fast Charge Network Program Accessibility Requirements, which can be found in the Program Guidelines. Fast Charge Network Program Accessibility Requirements are not a substitute for following all federal ADA requirements as they are established and updated.
- Public charging stations should comply with all applicable environmental protection, building codes, and safety ordinances.
- Coordinate regular working sessions with permitting authorities to reduce the time and cost associated with permitting, especially if including an awning or canopy structure for weather protection; such structures may be treated and permitted differently in different areas.
- Include provisions in the site design to allow future deployment of additional charging stations and/or upgrade of current stations to higher power chargers. Example items to consider:
 - Extra conduit runs to additional parking spaces for future chargers.
 - Larger than required conduit to allow higher power upgrades (to support larger conductors in the future).
 - o Larger than required concrete pads to accommodate higher-capacity transformers in the future.
 - Appropriately rated switch gear, disconnects, metering bases, etc. to accommodate higher powered chargers and additional chargers in the future.
 - Extra circuit breaker spaces for future chargers.
 - o Provisions in site host agreements to enable future expansion.



Construction, Installation, and Commissioning

- Complete **Environmental Checklist Review**, which can be found in the **Program Guidelines**, for final site approval before beginning construction activities. Additional information will be provided to outline necessary documentation and required information to complete this review.
- After securing the necessary permits, complete civil engineering site preparations such as trenching and pouring foundations for equipment.
 - Third-party service providers may be helpful during the construction process.
- A final inspection by local permitting authorities is usually required; coordinate regular working sessions with permitting authorities throughout construction to speed up reviews and avoid surprises.
- Perform final site commissioning of any charging infrastructure, including the connection of the chargers to the utility's electric service and to the cellular network that provides remote monitoring and service.

Commercial Operation

- After final site commissioning, the EV charger commences commercial operation and will then undergo regular preventative maintenance as well as unplanned corrective maintenance throughout its lifetime.
- Assess charging infrastructure maintenance and operation needs and costs.
 - Charger companies and network providers typically offer subscription-based services for regular O&M services for a set period (e.g., five years).
- Chargers are typically remotely monitored and controlled through a software back-end and user interface "network." In many cases, over-the-air firmware updates can continuously improve charger functionality.
- Certain local customer service functions such as general housekeeping, and/or maintenance support
 functions may be best supported by the site host (e.g., the site host can alert the O&M provider if the
 station appears to be damaged); ensure these expectations are communicated to local site host staff
 members and are reflected in the site host agreement.



Sign Design and Location

On the next page is an example of signage that the Fast Charge Network program would encourage at fast charging sites. Although there are many EV charging station sign designs used by different stakeholders across the U.S., the recommendations below were designed to create simple and consistent signage for fast charging locations given the following considerations:

- Given the short duration of a fast-charging session, it is preferred that site hosts utilize signage that encourages parking spot turnover by allowing EVs to park in said spots only while actively charging.
- The Federal Highway Administration (FHWA) provides options for signage templates in its Manual on Uniform Traffic Control Devices (MUTCD). These FHWA-approved templates were utilized when designing these signage recommendations. Visit <u>mutcd.fhwa.dot.gov</u> for more information.
- EV signage should be erected for each parking spot with access to the fast-charging equipment. For example, site hosts with one fast charger that can charge two vehicles at the same time should install two sets of signposts, one centered in front of each parking spot accessing the charging station.
- For those fast-charging sites located in large campuses or parking lots, it is important for wayfinding signage to be provided within the property to assist EV drivers in finding the actual charging stations. Such wayfinding should be placed at major campus/parking lot entrances and continually placed throughout the property to lead drivers to the charging station location. Wayfinding markers should combine EV charging station logo signs (MUTCD Template D0-11b (Alternate)) with directional arrows and be placed at regular intervals, where needed.





Wayfinding Signage



From left to right, MUTCD Templates M5-1, M5-2, M6-1, M6-2, and M6-3

Parking Spot Striping and Stenciling

All parking spots with access to fast charging station(s) should be painted to provide added visibility for EV motorists. Specifically, it is recommended that site hosts solidly paint parking spots with access to the fast-charging equipment in the "electric green" color, #00FF00. For those spots, it is also recommended to stencil the words "Electric Vehicle Charging" at the entrance to the charging stall. These features will help EV drivers find the charging station(s) while also discouraging non-EV drivers from parking in said stalls and blocking off charging station use.

Additionally, it is suggested that a yellow parking bumper/wheelstop with black striping be placed in each spot with access to the fast-charging station(s), to improve pedestrian safety, help further designate the parking spot(s) as reserved for special use, and minimize the possibility of drivers damaging loose charging station cables when parking.



The left figure below is a side-angle of a single parking spot, demonstrating the posting of signage at the head of the fast-charging parking space, the placement of a bumper/wheelstop, and the electric green stenciling design in the recommendations. The right figure below is a top-down view of a typical fast charging site, which shows the fast-charging station positioned in the center of two adjacent parking spots. EV signage is centered in front of each parking spot, reflected in this example as blue rectangles. These two figures show recommended fast charging station stenciling needed to maximize parking spot visibility and minimize the risk of non-EVs parking in the reserved spots.





FHWA MUTCD Appendices

- Sign Template D9-11b (Alternate), issued April 1, 2011
- Sign Template R7-113, issued June 17, 2013
- Sign Template R7-113aP, R7-113bP, issued June 17, 2013



D9-11b (Alternate) Electric Vehicle Charging (Alternate Symbol)

	Α	В	С	D	E	F	G	Н	J	К	L	М
C	24	0.5	1.5	7.75	4 E(m)	1.75	3	2	20.5	1.5	7.25	2.814
	30	0.75	1.875	9.625	5 E(m)	2	4	2.5	25.625	1.875	9.063	3.518

* See page IA-13-2 for symbol design

Ν	Р	Q
0.148	3.174	0.507
0.185	3.968	0.635

COLORS: LEGEND, BACKGROUND – BLUE (RETROREFLECTIVE) SYMBOL, BORDER – WHITE (RETROREFLECTIVE)





UPPER LEFT SECTION					
COLORS:	LEGEND, BORDER -	WHITE (RETROREFLECTIVE)			
	BACKGROUND -	RED (RETROREFLECTIVE)			
UPPER RIGHT SECTION					
COLORS:	LEGEND, BORDER -	RED (RETROREFLECTIVE)			
	BACKGROUND -	WHITE (RETROREFLECTIVE)			

* Reduce character spacing 40%.

** Reduce character spacing 60%.

*** Type D Arrow.

LOWER SECTION COLORS: LEGEND, BORDER – RED (RETROREFLECTIVE) BACKGROUND – WHITE (RETROREFLECTIVE)





VEHICLE MUST BE PLUGGED IN (Plaque)



VACATE STALL WHEN CHARGING COMPLETED (Plaque)





COLORS: LEGEND, BORDER – BLACK (RETROREFLECTIVE) BACKGROUND – WHITE (RETROREFLECTIVE)

APPENDIX C – SAMPLE GRANTEE INVOICE

SAMPLE GRANTEE INVOICE

BILL TO:	FROM:	DATE:
State of Tennessee, Department of Environment	Grantee Name	Month Date,
and Conservation, c/o Alexa Voytek	Point of Contact	Year
Davy Crockett Tower, 9 th Floor	Mailing Address	
500 James Robertson Parkway	Telephone Number	
Nashville, TN 37243	Email Address	
615-613-1096		
Alexa.Voytek@tn.gov		

HARDWARE	
DC Fast Charging Station #1 (insert serial number) R*	\$50,000.00
DC Fast Charging Station #2 (insert serial number) R	\$50,000.00
Recommended spare parts NR**	\$5,000.00
Hardware Delivery Fees R	\$3,000.00
Taxes R	\$12,000.00
Subtotal (Non-Reimbursable)	\$5,000.00
Subtotal (Reimbursable)	\$115,000.00
Total	\$120,000.00
SITE PREP AND FAST CHARGE MAKE-READY	
Site Acquisition Costs (i.e., property rental) NR	\$10,000.00
Engineering, Permitting, and Design R	\$15,000.00
Electrical Equipment for Fast Charge Make-Ready R	\$13,000.00
Subtotal (Non-Reimbursable)	\$10,000.00
Subtotal (Reimbursable)	\$28,000.00
Total	\$38,000.00
CONSTRUCTION, INSTALLATION, AND COMMISSIONING	
Eligible Construction and Installation R	\$125,000.00
Commissioning R	\$10,000.00
Subtotal (Non-Reimbursable)	\$0.00
Subtotal (Reimbursable)	\$135,000.00
Total	\$135,000.00
OPERATIONS AND MAINTENANCE, NETWORK FEES	
Five Year Networking Fees (x2 chargers) R	\$4,420.00
Five Year Maintenance Services Package (x2 chargers) R	\$31,000.00
Taxes R	\$2,000.00
Subtotal (Non-Reimbursable)	\$0.00
Subtotal (Reimbursable)	\$37,420.00
Total	\$37,420.00
PROJECT MANAGEMENT	
Site Host Vetting and Selection R	\$2,000.00
Legal Fees Associated With Site Host Acquisition NR	\$3,000.00
Completion of Required Reporting, Contract Management, Title VI Compliance NR	\$12,000.00
Subtotal (Non-Reimbursable)	\$15,000.00
Subtotal (Reimbursable)	\$2,000.00
Total	\$17,000.00
All Non-Reimbursable Costs ⁷	\$30,000.00
All Reimbursable Costs ⁸	\$317,420.00
All Total Costs ⁹	\$347,420.00

 ⁷ Add all "Subtotal (Non-Reimbursable)" rows to calculate "All Non-Reimbursable Costs" sum.
 ⁸ Add all "Subtotal (Reimbursable)" rows to calculate "All Reimbursable Costs" sum.
 ⁹ Add all "Total" rows to calculate "All Total Costs" sum.

AMOUNT DUE¹⁰

***R** = reimbursable

- ****NR** = non-reimbursable
 - Costs not directly tied to the purchase, installation, operation, and maintenance cannot be considered eligible costs under this Program. As such, they are non-reimbursable expenses. Receipts provided as supporting documentation for a Grantee's Invoice must detail all costs in an itemized fashion and identify reimbursable and non-reimbursable expenses for the project.
 - The costs above are hypothetical estimates and do not reflect true costs of the purchase, installation, operation, and maintenance of fast charging equipment.

¹⁰ Multiply "All Reimbursable Costs" by the eligible funding cap of 80% requested to calculate "Amount Due" total. Please note that the "Amount Due" total must be at or below the Total Grant Contract amount detailed in the Grant Budget.