

Pennsylvania State Plan for Electric Vehicle Infrastructure Deployment

National Electric Vehicle Infrastructure (NEVI) Formula Program



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## Introduction

This plan outlines the Commonwealth's approach to planning, deploying, and administering funding from Federal Highway Administration's (FHWA's) National Electric Vehicle Infrastructure (NEVI) Formula Program. The objective is to facilitate nationwide travel in electric vehicles (EVs) by establishing Electric Vehicle Supply Equipment (EVSE) charging station infrastructure that is convenient, affordable, reliable, safe, and equitable. Upon FHWA's approval in September 2022, the federal fiscal years (FFY) FFY22 and FFY23 NEVI Formula Program funds were released to the Pennsylvania Department of Transportation (PennDOT). As specified in the Bipartisan Infrastructure Law, the NEVI Program has allocated \$171,514,120 of formula funding to Pennsylvania over FFY 2022-2026. The FHWA granted approval to Pennsylvania's 2022 NEVI Plan on September 14, 2022.

This 2023 NEVI Plan update is for Pennsylvania's next fiscal year allotment of formula funds. This Pennsylvania 2023 NEVI Plan update follows the NEVI Plan update template published by the Joint Office of Energy and Transportation (Joint Office) on June 2, 2023.

PennDOT is presently overseeing the administration of FFY22 and FFY23 NEVI Formula Program funds through a competitive program. PennDOT issued the Round 1 Notice of Funding Opportunity in January 2023. An updated Round 1 Notice of Funding Opportunity was subsequently announced by PennDOT after the release of the final rule for NEVI minimum standards and requirements by US Department of Transportation (USDOT)/FHWA. Currently, PennDOT is conducting a review of the Round 1 Submissions and working toward Notice of Selection in August 2023.

#### PennDOT Will Receive:

\$171.5 Million in NEVI Formula Program funding over 5 years \$61.9 Million in FFY 2022 and 2023 \$36.5 Million in FFY 2024

This competitive program is designed to solicit Submissions from eligible entities for the installation, ownership, operation, maintenance, and reporting of compliant NEVI-funded EV charging stations across the Commonwealth of Pennsylvania.

The 2023 NEVI Plan update represents the progress made in the planning and administration of Pennsylvania's NEVI funds since the approval of the 2022 NEVI Plan by FHWA. As certain sections of the NEVI Plan remain consistent from year to year, PennDOT has developed a more streamlined version of the NEVI Plan, starting with the 2023 edition. This streamlined approach will serve as the foundation for future annual NEVI Plan updates. PennDOT expects that the 2024 NEVI Plan update will be further informed by the final selection of awarded EVSE charging station Projects resulting from the ongoing competitive process using FFY22 and FFY23 funds.

Table 1 lists each section of the 2023 NEVI planning document and provides a brief summary of updates and modifications made since the 2022 NEVI Plan.



Table 1. Additional Information and Modifications to PennDOT's 2022 NEVI Plan

NEVI Plan Section	2023 Updated and Modifications to 2022 NEVI Plan
Introduction	Added summary of 2023 NEVI Plan section updates.
State Agency Coordination	Added discussion on coordination with AASHTO, NASTO, and NASEO.
Public Engagement	Added detailed Community Engagement Outcomes report information as required by the 2023 NEVI Plan Template, utility engagement, and site-specific community engagement.
Plan Vision and Goals	Added a goal related to data collection and sharing.
Contracting	Added updates on development and status of the PennDOT NEVI competitive program.
Existing and Future Condition Analysis	Updates to mapping of existing and upgradable EVSE, and information on AFC termini.
EV Charging Infrastructure Deployment	Updated information on how the 2023 Round 1 NEVI competitive program will deploy stations toward FHWA fully built out certification.
Implementation	No significant changes.
Civil Rights	No significant changes.
Equity Considerations	Updated information on 2023 NEVI Equity mapping, and updates to the identification and preliminary quantification of Justice40 benefits.
Labor and Workforce Considerations	Updated on how 23 CFR 680.106 (j) compliance is included in the 2023 NEVI competitive program.
Physical Security & Cybersecurity	Updated on how the 2023 NEVI competitive program includes physical and cybersecurity requirements and compliance.
Program Evaluation	No significant changes.
Discretionary Exceptions	Updated request for a discretionary exception.
Appendix Supporting Materials	Added definitions, summary of stakeholders' engagement, and summary of stakeholder survey

The NEVI Plan is a dynamic document with a five-year vision that will undergo annual updates. Each update will incorporate changes to initiatives and focus areas from lessons learned, best practices, and improvements based on the feedback and input received from communities and stakeholders. This iterative approach ensures that the plan remains responsive to evolving needs and aligns with the voices of those it serves.

This version of the plan facilitates the allocation of federal funds for FFY 2024. It's important to note that these funds do not have a specific expiration date, allowing flexibility in their utilization. The next annual plan update will be necessary to allocate funds for FFY 2025, ensuring continued progress in the implementation of the NEVI Program.



# **State Agency Coordination**

This section updates the 2022 NEVI Plan with information on how Pennsylvania has coordinated with other State agencies. During these coordination efforts, PennDOT emphasizes opportunities to utilize U.S.-made EV supply equipment. Additionally, PennDOT's contract language requires Buy America provisions and PennDOT has met with several Pennsylvania-based companies to learn about their equipment. PennDOT shared these best practices while coordinating with other states.

#### Memorandum of Understanding with Other Agencies

While PennDOT does not have a formal Memorandum of Understanding in place with any other agency to help administer the NEVI Program, it engages with the Pennsylvania Department of Environmental Protection's Energy Programs Office and its Interagency EV Working Group. Additionally, PennDOT collaborates with peer Commonwealth agencies on NEVI planning and implementation. This engagement ensures coordination for the advancement of NEVI initiatives.

#### **Interagency Working Group**

PennDOT continues to facilitate weekly NEVI project meetings with internal PennDOT units including transportation planning, policy office, contract management division, program management division, Office of Chief Counsel, Strategic Development and Implementation Office, and the Environmental Policy and Development Division. PennDOT also collaborates with the PA Division Office of FHWA and peer agency partners that have subject matter experience with EVs and EVSE charging station deployments. The focal point of these meetings has been on development, refinement, and ultimate implementation of the NEVI Funding Opportunities for administration of Pennsylvania's NEVI Formula Program fund.

## **Neighboring State Agency Coordination**

PennDOT communicates with such neighboring states as Delaware, Ohio, Maryland, New Jersey, and New York through various channels including email exchanges, phone calls, meetings. These interactions are to coordinate EV charging stations shared interstates along Alternative Fuel Corridors (AFCs). The focus is on adhering to NEVI's 50-mile requirements and other pertinent criteria. Table 2 shows the planned existing and NEVIcompliant EV charging stations





located within 50 miles of the Pennsylvania border with these adjacent states. These include updates from Ohio's NEVI Round 1 site announcement. All out-of-state sites in Table 2 are included on Figure 3 which shows all existing DCFC (direct current fast charging) sites in Pennsylvania.

PennDOT is also part of The Eastern Transportation Coalition, National Association of State Energy Officials (NASEO), American Association of State Highway and Transportation Officials (AASHTO) and Northeast Association of State Transportation Officials (NASTO). Through these associations, PennDOT coordinates with other State and Federal agencies, energy service providers, and private sector stakeholders. PennDOT takes an active leadership role by contributing to discussions and efforts aimed at promoting the adoption and integration of EVs within the transportation sector, providing guidance on EV program design, exploring successful public-private partnership models, and providing and seeking technical assistance.

Table 2. Pennsylvania's Neighboring State NEVI Compliant EV Charging Stations within 50 miles of PA Border

State	Route	Distance from PA border (mi)	Location	Number of DCFC Charging Ports	EV Network	Status
ОН	I-70	31.7	66377 Belmont Morristown Rd Belmont, OH 43718	TBD	EVgo	Announced
ОН	I-80	11.6	2721 Salt Springs Rd Girard, OH 44420	4	Electrify America	Active
ОН	I-90	20.8	2246 OH-45 Austinburg, OH 44010	TBD	EVgo	Announced
NY	I-81	9.5	2 Industrial Park Dr Binghamton, NY 13904	4	Electrify America	Active
NY	I-84	37.6	1201 NY-300 Newburgh, NY 12550	4	Electrify America	Active
NJ	I-80	39.5	28 W Main St Denville, NJ 07834	4	Electrify America	Active
NJ	I-295	10.5	150 Quakerbridge Mall Lawrenceville, NJ 08648	4	Electrify America	Active
DE	I-495	10.7	4000 N Dupont Hwy New Castle, DE 19720	6	Electrify America	Active
MD	I-70	29.7	10420 Walmart Dr Hagerstown, MD 21740	4	Electrify America	Active

Source: AFDC, OhioDOT



# **Public Engagement**

The public engagement process allows PennDOT and peer agency representatives to engage their stakeholders. Engagement is planned in phases to grow the content of the competitive program by generating and examining public feedback.

As part of the NEVI State Plan, PennDOT developed a three-phase, multi-year statewide public engagement strategy. The plan identifies:

- Who PennDOT intends to engage with,
- How PennDOT plans to engage the stakeholders and the public,
- When the outreach and engagement will occur, and
- What PennDOT plans to present as well as what they will do with the feedback that they receive through the engagement sessions.

The goals and planned activities have not changed. The priorities have adjusted to those shown below. The three phases of the plan align with federal public engagement objectives.

- Phase 1: Statewide Partners and General Education and Outreach
- Phase 2: Focus on Neighboring Communities to AFCs
- Phase 3: Community-based Project Outreach

#### Community Engagement Outcomes Report

PennDOT and its NEVI Program partners have prioritized educational engagement with the public and diverse stakeholder groups to share information, gather strategic input, and inform PennDOT's approach. Further information on these efforts is outlined below and in the Stakeholder Engagement Sessions Report in Appendix D.

In 2022, PennDOT's public engagement focused on general EV outreach and education. PennDOT reached out to federal, state, and utility incentive programs consumers, commercial vehicle fleet owners, and local stakeholders. PennDOT's stakeholder involvement sought input on NEVI Program considerations and preferences, helped it to understand utility needs and coordination, and allowed for networking among diverse stakeholders.

A pilot community engagement session was hosted in the Manchester-Chateau Neighborhood of Pittsburgh. This was the only true community engagement session aimed at education, EV incentive and opportunities, utility education, and general discussion with community leaders and members. PennDOT plans to conduct more community sessions closer to community deployments and for non-interstate AFC stations. Seven of the 10 stakeholder engagement sessions were hosted either within or adjacent to a disadvantaged community and community members were welcome and encouraged to attend.

#### **Tribal Engagement**

There are no federally recognized native or indigenous tribal lands in the Commonwealth of Pennsylvania.



#### **Utility Engagement**

PennDOT and program partners continue to coordinate and engage with electric utility providers across the Commonwealth. Engagement activities include online surveys, small symposiums, larger summit meetings, and an all-day collaborative event designed to spur solutions to Pennsylvania's expanding electric energy needs. Utility engagement directly informs PennDOT's NEVI competitive program and annual NEVI Plan update. In addition:

- PennDOT partnered with electric utility providers at regional Stakeholder Engagement Sessions. Participants had an opportunity to learn more about each utility's approach to EV deployment, management, and project coordination.
- PennDOT met with the Rural Utility Co-op and Pennsylvania Rural Electric Association to discuss PA NEVI Program coordination.
- Electric utility providers helped develop a utility form that is now part of the PA NEVI submission process.
- Beginning in early 2023, PennDOT participated in the newly formed Pennsylvania Public Utility Commission (PUC) EV Rate Design Working Group. Thus far, this has included attending stakeholder meetings and providing written comments to inform the PUC's efforts. In the spring of 2023, the EV Rate Design Working Group recommended that the PUC Commissioners adopt a Policy Statement to encourage electric utilities to file EV rate designs.

Electric Utility engagement activities are detailed further in the engagement tables that follow below.

#### How Engagement with Utility Providers Shaped 2023 NEVI Implementation and Plan Updates

- Key Themes of Utility Input: Utility partners stressed the need for coordination with the Commonwealth and Prospective Contractors in the planning, design, and implementation of NEVI funded EV charging stations. Electric utilities recommended high level analysis of Project locations to reduce burdens on utility staff during the competitive program process. In addition, utility partners provided PennDOT key utility points of contact for the NEVI Program, which are included on PennDOT's NEVI webpage.
- PennDOT Use of Utility Input: PennDOT applied utility input in refining its 2023 NEVI Program, taking specific redline suggestions recommended by utility partners to improve the state's "Utility Coordination Form," which is a required part of proposal Submissions. PennDOT also catalogued data provided by utility partners on any interchanges within Pennsylvania's EV AFC charging station service gaps that would require major grid upgrades to install NEVI compliant EVSE stations. PennDOT will factor this data into final evaluation of proposals received from its competitive process.

#### Site-Specific Public **Engagement**

PennDOT places a strong emphasis on community engagement and encourages Contractors to actively involve local communities in their Projects. As part of the evaluation process, PennDOT has established specific criteria to assess Contractor's commitment to site specific community engagement. Furthermore. Contractors required to outline their strategy for public and stakeholder engagement. demonstrating how they will actively involve and communicate with the community throughout the Project's



lifecycle. By incorporating these criteria, PennDOT ensures that Projects not only deliver the necessary infrastructure but also foster local participation, skill development, and meaningful engagement with the communities they serve.

#### Stakeholder Engagement and Educational Outreach

PennDOT conducted 59 outreach and engagement meetings when developing the initial NEVI State Plan. The outreach and public engagement activities are planned to continue throughout the life of the 5-year NEVI Program and feedback from the sessions will inform the program direction, priorities, and goals. After the NEVI State Plan was approved in September 2022, PennDOT held 10 in-person meetings and one virtual meeting across the commonwealth with stakeholders to increase awareness of the PA NEVI Plan and the available funding and to encourage networking and partnering. The meeting dates and locations were as follows:

- October 13, 2022 Allentown, PA
- October 14, 2022 Harrisburg, PA
- October 24, 2022 Columbia, PA
- October 25, 2022 Jessup, PA
- November 1, 2022 Virtual Webinar
- November 3, 2022 Pittsburgh, PA
- November 10, 2022 Williamsport, PA
- November 15, 2022 Blue Bell, PA
- November 22, 2022 Philadelphia, PA
- December 1, 2022 Reading, PA
- December 8, 2022 Clearfield, PA



The stakeholder meetings included presentations from the two PA Clean Cities Coalitions, the local electric distribution company, the Department of Environmental Protection, and PennDOT. The NEVI Stakeholder Engagement Sessions Fall 2022 Final Report (see Appendix D for full link to full report) details the attendees, presentations, and key discussion themes of these meetings. Attendees of these meetings included individuals from the following groups:

- EV Charging Infrastructure
- Stakeholders/Businesses
- Labor/ Workforce Organizations
- **Educational Institutions**
- Commercial Businesses
- Utilities
- Government Agencies (Local/ State/ Federal)
- Transit/ transportation Agencies
- Other

In conjunction with the stakeholder meetings, PennDOT invited the meeting attendees to participate in a seven-question survey. Seventy-nine of the 276 unique meeting attendees provided responses. A summary of the stakeholder survey results is included in Appendix C and details the marketing materials, the presentation slides, and a summary of the key discussion topics for each session. The summary also includes the survey questions and responses.

Appendix B includes detailed information on all NEVI and EV outreach and community engagement activities completed in 2022 and 2023 to date by PennDOT. This includes the following:

- PennDOT engaged in 43 NEVI and EV outreach, presentations, meetings, and activities with a variety of groups and organizations across Pennsylvania.
- PennDOT completed 21 NEVI Program presentations in 2023 including professional organization meetings, forums, and webinars that were focused on engaging with governmental entities and the private sector.
- PennDOT took part in 15 meetings and discussions regarding EV charging adoption, policy, workforce, and interagency coordination with groups including the general public, labor organizations, governmental entities, and the private sector.
- PennDOT participated in NEVI and EV leadership activities covering 19 distinct engagements including a radio interview, presentations, concept papers, trainings, and round tables with a variety of audiences.

PennDOT will continue to integrate session outcomes to guide future decision making related to the NEVI Program and EV's in Pennsylvania.



#### Focus on Neighboring Communities to AFCs

As part of Phase 2 of the Public Engagement Framework, the NEVI Core Team will schedule sessions in communities adjacent to AFCs where EV charging Projects have been selected for installation. Figure 5 in the section discussing Equity Considerations shows the disadvantaged communities census tracts from the Equitable Transportation Community (ETC) explorer tool and the Climate and Economic Justice Screening Tool (CEJST) overlaid on the AFCs. PennDOT will select locations to hold community engagement sessions in late 2023. The goals of these sessions are to educate, learn, and hear from communities on their perceived benefits and risks of EV's to their community, and seek feedback on the NEVI Plan to address concerns.

As part of the Submissions for funding requests, the Prospective Contractors were asked to present a public and/or stakeholder engagement plan for their site. If a suitable plan is submitted, they receive one point toward the score for their Submission, per the NEVI Funding Opportunity terms. Selected Contractors then may have a participation role in Phase 2 outreach as well.

#### Community-Based Project Outreach

After PennDOT achieves fully built out status of the AFCs in accordance with the federal and state NEVI Plan, the remaining funds can be allocated to other EV charging sites. PennDOT will develop Phase 3 outreach to gather feedback and refine the funding goals for the third and subsequent funding rounds of the NEVI Program. To prepare and inform future NEVI plans and strategies, PennDOT will be conducting two surveys this fall. One survey will be focused on Round 1 NEVI Funding Opportunity lessons learned. The other will be focused on community and general public feedback on NEVI planning efforts.

PennDOT collaborated with the Manchester Citizens Corporation and Mobilify Southwestern Pennsylvania to host a pilot community engagement session in the Manchester-Chateau neighborhood of Pittsburgh on September 14, 2022, to discuss EVs, incentives, and the NEVI Program with community members and partners. This meeting will serve as the model for future community engagement meetings.

## Keeping Pennsylvania Informed: NEVI Program Website

PennDOT hosts and manages the Pennsylvania NEVI Formula Program and NEVI Funding Opportunity website, which will continue for the duration of PennDOT's NEVI Program. The Pennsylvania NEVI Program website is designed to provide a central location and clearinghouse for all Pennsylvania NEVI Formula Program information—including Pennsylvania NEVI Plan and updates, NEVI Formula Program resources, resources for local governments, outreach activity information, and links to register for public engagement sessions.

The website will also host resources related to Pennsylvania's NEVI Program and provide information for transparency to the public on NEVI Funding Opportunities, funded parties, and other reporting information.

#### **Ongoing Public Engagement Topics**

PennDOT anticipates continued future public engagement, input, and feedback from other state Commonwealth agencies, the Interagency Working Group, stakeholders, and public audiences on additional topics throughout the administration of the NEVI Formula Program—including input on future AFC designations, future rounds of NEVI Program, and input on regional and local EVSE charging needs and priorities related to equity, public transportation, freight, and other supply chain needs. Annual updates to the NEVI Plan will continue to include Community Engagement Outcomes reports and details on the next fiscal year engagement plans.



## Plan Vision and Goals

PennDOT's vision for the NEVI Program remains the same as written in the 2022 NEVI Plan: To strategically deploy a convenient, reliable, affordable, and equitable EV charging network to support range confidence for Pennsylvanians and visitors.

#### PennDOT's NEVI goals include:

- Construct a consistent, robust charging network to enhance availability when and where people need to charge,
- Fund infrastructure that is safe and convenient for travelers.
- Ensure EV infrastructure funding is distributed and applied in an equitable manner and provides benefits to all populations including underserved and rural communities,
- Complement the NEVI Formula Program with proper training and diversity of the workforce to support economic growth, equity, and safety,
- Develop a charging network to support freight and goods movement through the Commonwealth, and
- Provide environmental benefits that can be shared by all Pennsylvania's communities.

PennDOT's goals were developed to remain consistent throughout the execution of the NEVI Formula Program. These goals already support the establishment of an interconnected network that will facilitate equitable access and network reliability.

PennDOT is adding the following data collection related goals to align with FHWA NEVI Formula Program guidance:

- Meet FHWA requirements for data collection and sharing.
- Ensure Contractors and stakeholders collect data per USDOT requirements and facilitate timely data reporting to USDOT.

#### Quantifiable Goal

The quantifiable goal for FFY 2022 and FFY 2023 is to ensure all AFCs in Pennsylvania are fully built out, locating DCFCs at least every 50-miles and within one mile of an interstate exit or highway intersection along designated AFCs.

# Strategy Following AFC Fully Built Out Status

PennDOT anticipates that a minimum of between 70 and 80 NEVI compliant EVSE charging stations will be funded to achieve the fully built out requirements of the NEVI Formula Program. Most or all FFY22 and FFY23 NEVI Formula Program funds will be needed to achieve fully built out status under current program requirements, assuming an estimated federal share of approximately between \$600,000 and \$1,000,000 for a new construction site and between \$200,000 and \$500,000 for an upgraded site to implement a NEVI compliant EVSE charging station (based on recent industry estimates). Following USDOT certification of PennDOT's AFCs as fully built out to NEVI compliant standards, PennDOT will seek public engagement to expand NEVI funding opportunities to allow for flexibility to right size EVSE deployments to community charging, regional routes of significance, and destination charging. PennDOT is currently considering redundant light-duty charging and medium- and

For the future deployment efforts, PennDOT will consider additional input from residents, disadvantaged communities, public transportation, freight stakeholders, and other stakeholders. It is anticipated public engagement for this effort will begin in fall of 2023. PennDOT will analyze how public engagement input intersects with other planning factors such as average annual daily traffic volumes, utility power availability, accessibility, regional EV registration numbers, and other local needs. Additional details on the future funding phases will be provided in annual PennDOT NEVI State Plan updates.

heavy-duty EVSE charging stations along the AFCs concurrently with working toward fully built-

out status to effectively use the FFY 2022, FFY 2023, and FFY 2024 funds.



# Contracting

Since the approval of PennDOT's 2022 NEVI Plan, agency staff focused on the development of a NEVI Funding Opportunity and ultimately released the Round 1 funding opportunity on January 6, 2023 (updated March 13, 2023) that closed on May 5, 2023. PennDOT is working toward Notice of Selection in August 2023.

PennDOT will establish Agreements with eligible entities for the installation, ownership, operation, maintenance, and reporting of NEVI-compliant EV charging stations across the Commonwealth



funded in whole or in part through the NEVI competitive program. PennDOT's contracting and program administration process supports efficient and effective deployment of EV infrastructure. PennDOT focuses on several key strategies to achieve efficient and effective deployment:

- Strategically deploy EV infrastructure:
  - Round 1 Agreements focus initially on designated AFCs, starting with interstate highways, and then US highways.
  - o Contractors must meet or exceed minimum NEVI compliance criteria.
  - At locations outside PennDOT's right-of-way at facilities that provide customer amenities.
- Contractors plan and design EVSE Projects collaboratively by engaging various stakeholders, state agencies, peer organizations, and community representatives.
- Contractors are selected via a transparent and competitive bidding process.
- Competition allows PennDOT to benchmark and compare the costs of charging infrastructure Projects with industry standards and best practices. PennDOT's intent is that no single Site Host or EVSE station operator may receive more than 25% of the total amount awarded in Round 1.
- A scoring method that encourages Prospective Contractors to propose innovative and cutting-edge approaches that can enhance the efficiency and effectiveness of EV charging infrastructure.
- Agreement provisions that allow PennDOT to monitor and enforce compliance with federal and state civil rights laws, physical and cybersecurity standards, and other regulatory requirements. Contractors comply with these regulations and report relevant data.
- Each round includes a Program Evaluation Plan to quantify and evaluate the benefits and impacts of investments.
- Agreement-based data collection and sharing requirements to ensure availability of information on charging infrastructure locations, pricing, real-time availability, and accessibility.
- Provisions designed to maintain Uptime through resilience during emergencies and extreme weather, among other strategies.
- Competition that allows PennDOT to balance prompt AFC deployment with providing funding to support EV deployment in diverse communities. Some incentive is given in Round 1 and Round 1A to provide charging in disadvantaged communities through scoring incentives; however, disadvantaged communities will be a central focus of Round 2 and future community charging efforts.
- PennDOT's contract language requires Buy America provisions and PennDOT has met with several Pennsylvania-based companies to learn about their equipment.

## Status of Contracting Process

The contracting process for the PennDOT's NEVI competitive program involves the following steps:

- 1. Competitive Program Planning: The primary objective of the NEVI Program is to achieve fully built out AFC status so there is accessible and reliable DCFC available every 50 miles or less along the AFC network. For Round 1 funding PennDOT decided to narrow this to the Interstate AFC network. PennDOT found 12 existing EV charging sites (and three more planned) that met the charging and location requirements for AFCs prior to Round 1. As a result, PennDOT sought to fill the gaps between these existing sites. Potential interchanges were then grouped and prioritized based on where gaps in the system exist. Going forward, a similar process will be used to identify and prioritize future sites based on where required charging exists as of the solicitation date.
- 2. Solicitation Planning: PennDOT provided NEVI Funding Opportunity via a competitive process to encourage private partners to plan, design, construct, operate, and maintain EV charging sites. To streamline the submission, selection, and contracting process, PennDOT decided to leverage the Commonwealth's existing eGrants Public Portal Interface for solicitation of EV charging site Submissions.
- 3. Notification of NEVI Funding Opportunity: PennDOT announced the Funding Opportunity, with details of the NEVI Program opportunities, project requirements, eligibility criteria, and submission procedures. The Funding Opportunity was widely published through various channels to attract potential Contractors.
- 4. Meetings and Webinars: PennDOT organized meetings and webinars for interested stakeholders. These meetings fostered open communication and engagement that encouraged businesses, including small businesses, to participate in the NEVI funding process.
- 5. Submission Period: Prospective Contractors completed their Submissions through PennDOT's Public Portal Interface.
- Evaluation Process: PennDOT followed a competitive process that considers both cost and non-cost factors, such as project approach, qualifications, and future proofing, to select the most suitable and innovative proposals.
  - PennDOT conducts a thorough evaluation of all Submissions based on the identified selection criteria to assess their alignment with the Project's objectives and priorities. The evaluation includes scoring based on a standardized rubric, comparing each Submission's merits fairly and transparently.
  - Following the evaluation process, PennDOT selects a subset of Prospective Contractors for a conditional award. PennDOT sends a Notice of Selection to the selected Contractors. Selected Contractors secure PennDOT authorization to enter proposed sites and will be asked to accept the conditional award before other steps in the process can proceed.
- 7. Post-Selection Period: Prospective Contractors selected for a conditional award must sign an Agreement with PennDOT. Simultaneously, PennDOT performs NEPA Environmental Review for the conditionally awarded sites and the conditionally awarded Contractor submits a draft or fully executed Site Host Agreement. Following the satisfactory NEPA review, approval of a draft Site Host Agreement (if applicable), and full execution of an Agreement, the conditionally awarded Contractor becomes the

Contractor. Following the fully executed Agreement, the Contractor then submits a fully executed Site Host Agreement (if needed and not submitted previously) and submits the site final design. When the final design is approved and all other preconditions are met, PennDOT will issue a Notice to Proceed (NTP), and work may begin.

- 8. Kick-Off Meeting: After NTP, PennDOT holds a kick-off meeting with the selected Contractors to discuss Project details, expectations, reporting requirements, and project milestones. PennDOT also holds additional periodic meetings to monitor the progress of the Contract.
- 9. Project Implementation: The successful Contractors proceed with their proposed EV charging station Projects, adhering to the Agreement terms and project timeline.
- 10. Ongoing Monitoring and Oversight: PennDOT maintains ongoing monitoring and oversight of the contracted Projects during the five-year Period of Performance to ensure compliance with requirements, timely delivery, and quality service.

PennDOT remains open to potential improvements or revisions to the contracting process. PennDOT will carefully assess the outcomes of Round 1 and consider valuable insights and lessons learned to enhance future rounds' contracting strategies. The aim is to continuously refine and optimize the process, ensuring that it aligns with the evolving program requirements and efficiently delivers the necessary EV infrastructure. Following the NEVI Round 1 awarding process, PennDOT will conduct a survey to gather feedback specific to the Round 1 funding opportunity.

**Table 3** identifies the contracting status of current and planned rounds:

**Table 3. Status of Contracting Process** 

Number	Contract Type	Contract Status	Timeline
Round 1	Competitive bidding through NEVI Funding Opportunity, in compliance with 23 CFR 636 contracting regulations	Ongoing (currently reviewing the Submissions)	January 2023 – November 2023 (NTP)
Round 1A	Competitive bidding through NEVI Funding Opportunity, in compliance with 23 CFR 636 contracting regulations	Future	Starts September / October 2023
Round 2, 3, and Beyond	Competitive bidding through NEVI Funding Opportunity, in compliance with 23 CFR 636 contracting regulations	Future	To be determined

## Contracting Strategy for Delivery of Ongoing Operations and Maintenance

PennDOT's contracting strategy for achieving efficient delivery of ongoing operations and maintenance (O&M) activities during and after the Period of Performance focuses on the following key elements:

1. Comprehensive Agreement Provisions: The Contractors have specific requirements for operations and maintenance. Contractors are incentivized to include a prepaid fiveyear O&M service contract as part of their Submission. Contractors are required to provide an Operations and Maintenance Plan prior to the completion of construction.

The Agreement also provides for transfer of ownership or maintenance responsibilities, Uptime requirements, and failure to maintain, among other things.

- 2. Regular Monitoring and Reporting: PennDOT conducts regular monitoring and reporting of the Contractors' performance during the Period of Performance. This monitoring includes data collection, regular inspections, and periodic reporting to track Uptime and identify areas for improvement.
- 3. Training and Workforce Development: Contractors use certified and trained electricians, along with other local labor sources for EVSE operation and maintenance.
- 4. Collaboration with Stakeholders: Contractors must provide ways for customers and community members to report problems, along with proper responses to those reports. Regular communication and feedback mechanisms are established to address customer and community concerns or issues promptly and efficiently.
- 5. Resilience and Emergency Planning: PennDOT incorporates resilience and emergency planning measures into the contracting strategy to ensure that the charging infrastructure can withstand and recover from unexpected events and extreme weather conditions.
- 6. Agreement Provisions: Contractors are bound by contractual obligations, and enforcement is driven by the potential risk of breaching the contract and the requirement to repay funds. To ensure consistent performance, an action plan is mandatory in case of unsatisfactory Uptime. Additionally, to further incentivize timely and effective action plans, a provision has been introduced to withhold retainage while an active action plan is in place.

## **Contractor Engagement with Communities**

PennDOT has established specific criteria to assess the Contractor's commitment to community engagement. This includes evaluating the utilization of local businesses and workforce throughout the various project stages—including planning, design, construction, and inspection, as well as operations and maintenance. Additionally, Contractors are expected to provide a detailed plan for workforce training, showcasing their approach to developing the skills and knowledge of the local workforce. Furthermore, Contractors are required to outline their strategy for public and stakeholder engagement, demonstrating how they will actively involve and communicate with the community throughout the project lifecycle.

#### Scoring Methodologies Utilized

Submissions are evaluated with a 100-point questionnaire that is scored using a standard scoring rubric. The scoring rubric, presented in **Table 4**, assigns points based on stated criteria. The full Round 1 scoring questionnaire and rubric are provided in Appendix III and Appendix IV in the Round 1 NEVI Program Document,



**Table 4. NEVI Funding Opportunity Scoring Criteria** 

Scoring Category	Points	Evaluation Responsiveness Considerations
Team Qualification and Experience	6	Evaluates the project team's past experience, funding commitments, sources and cash flow, rate structure, payment options, and billing practices, and other relevant experience.
Project Approach	6	Evaluates the Project planning, design and permitting, site preparation and construction, O&M duration and plan, Uptime plan, data sharing, and schedule and timeline.
Candidate Site Information (includes Interchange Score)	40	Evaluates the Project site location based on the ability to meet the NEVI requirements/interchange score, ability of the site to meet NEVI requirements for multiple AFC or other routes of significance, distance to nearest exit, major characteristics of the site with details on specific items, number of charging stalls and ports available for charging as built, total power available for charging as built, amount and quality of amenities.
Site Readiness	8	Evaluates coordination with utilities and network capabilities. Evaluates Project site National Environmental Policy Act (NEPA) readiness.
Future Proofing	4	Evaluates Projects for potential for future additional charging ports and power and ability to allow for parking and charging of medium duty and heavy-duty vehicles
Sustainability, Equity, Resilience, and Economic Development	12	Evaluates Project for renewable energy sources used for charging energy; innovative technologies and/or approaches to site design, charging, and power storage; involvement of local businesses and/or workforce; Accessibility for users with disability; provision for multiple payment options; provision for multilingual access; and adherence to PennDOT's EV equity principles and Justice40 initiatives.
Safety and Training	4	Evaluates Project for safety for users and safety of others; management approach and strategies to facilitate incident safety; plan for workforce training; and plan for public and/or stakeholder engagement.
Project Costs	20	Evaluates overall cost of Project proposed, grant amount requested, and breakdown of expected costs and narrative describing costs.
Total Points	100	

The interchange score is a common score given to Prospective Contractors based on the exit where the site is located. This score accounts for 16 out of 100 points and guides Submissions to interchange exits best suited for EV charging based on a variety of factors including:

- An AFC gap analysis based on distance from current NEVI-qualifying charging station,
- The total services within the 1-mile polygon including any business that is open to the public,
- The number of different service types including gas stations, truck stops, restaurant, grocery stores, big box stores, malls, and streets with many services (within specified distances of the interchange),
- The exit's proximity to an environmental justice area,
- The exit's proximity to an air quality non-attainment area, and
- Whether the exit is in a rural or remote area based on distance from an urbanized area.



#### **Awarded Contracts**

As of the publication of this updated NEVI Plan, no NEVI formula funding awards or contracts have been issued. PennDOT's 2023 NEVI Funding Opportunity Round 1 is currently in progress, and the milestones outlined in Table 5 are being followed. PennDOT received 271 unique Submissions for Round 1 and PennDOT anticipates conditional award announcements for Round 1 in August 2023.

Once awards are finalized, the selected Projects will undergo implementation, adhering to NEVI Program Requirements and other relevant regulations, to ensure the successful deployment of EV charging stations across the Commonwealth. Prior to opening Round 1A funding, the PennDOT team will complete an after-action review of Round 1 and incorporate the feedback into the Round 1A contracting process.

Table 5. PennDOT's NEVI Competitive Program Schedule

Date	Item
January 6, 2023	Round 1 NEVI Funding Opportunity program document released
March 13, 2023	Round 1 revised Funding Opportunity released to match updated Federal Minimum Standards Final Rule
March 24, 2023	Round 1 technical question period ended
March 27, 2023	Round 1 Submission period began
May 5, 2023	Round 1 Submission period ended
May – July 2023	Round 1 PennDOT Submission review period
August 2023	Round 1 conditional award approval and denial notifications
August – September 2023	Round 1 PennDOT NEPA Process begins
September – October 2023	Round 1 final award approval and denial notifications
October – November 2023	Round 1 Agreement execution; Notice to Proceed
Fall 2023	Start Round 1A Funding Opportunity to continue towards fully built out AFC status

## Promote Competitive Bids and Cost Containment

PennDOT utilizes a range of strategies and contract provisions to promote competitive bids and cost containment for the deployment of EV charging infrastructure including:

1. Early Announcement of Funding Opportunity: In a proactive step to promote transparency, PennDOT made a pre-announcement for the PennDOT NEVI Funding Opportunity in October 2022 for the EV charging station deployment. The preannouncement included a map with EV charging station gaps, webinar announcement, and website updates. With the Submission due date set more than six months in advance, Prospective Contractors were afforded time to prepare. PennDOT published the Funding Opportunity through various channels, including official state websites, social media platforms, and outreach meetings. These efforts were further bolstered by webinars that provided in-depth insights and addressed any queries from interested participants. As a result, an environment of open communication and collaboration flourished—motivating a varied range of businesses to actively participate in the

- competitive process, vying for the chance to make a significant impact in the realm of EV charging station deployment.
- 2. Transparent and Comprehensive Program Requirements: PennDOT's NEVI Funding Opportunity provides the program description, eligibility information, program requirements, submission procedures, a submission evaluation process including selection process and selection criteria, and post-selection activities to allow Prospective Contractors to understand the program's expectations.
- 3. Open and Competitive Submission Process: PennDOT's submission process allows qualified Prospective Contractors to participate, ensuring fair and open competition.
- 4. Best-Value Contracting: PennDOT implements a best value contracting process to enhance competitive submission and cost containment. This approach considers not only the project cost but also factors like technical expertise, experience, and innovation.
- 5. Cost Effectiveness: Federal financial commitment is capped at 80% of the total eligible project cost, with the remainder covered by Contractors. PennDOT awards extra points for additional Contractor contribution. To ensure proper financial management, PennDOT has established Agreement provisions specifying the process and timeline for reimbursing expenses incurred by the Project. Retainage provisions are in place to withhold 10% of total project cost, releasing 2% each year when the Contractor's O&M meets Uptime and reporting requirements. Contractors are obligated to certify their expenses, verifying their accuracy and compliance with the Project's financial guidelines. A clear timeline for final invoicing is established, streamlining the payment process and preventing delays. To ensure compliance with financial regulations, provisions for audits and recordkeeping allow for thorough examination of financial transactions and expenditures related to the Project throughout the project lifecycle.
- 6. Benchmarking and Cost Comparisons: As part of the evaluation process, PennDOT requested Contractors to provide the pricing for their proposed Utility Cost Information in the format provided in the Funding Opportunity. This allows PennDOT to thoroughly assess the proposed utility costs and compare them with benchmarks. By reviewing the detailed cost information provided by the Contractors, PennDOT ensured transparency and fair competition in the submission process.
- 7. Reporting: PennDOT requires the Contractors to follow the FHWA minimum reporting requirements of the final rule.
- 8. Incentives for Innovation: PennDOT encourages innovative solutions and technologies by offering additional points as part of the evaluation process that propose cost-effective and cutting-edge approaches.

## Plan for Compliance with Federal Requirements

Contractors must adhere to all relevant requirements under 23 U.S.C., 23 CFR 680, and 2 CFR 200, along with Commonwealth-specific requirements. Compliance is incorporated throughout



every stage of program administration. Refer to Table 10 in the Implementation section of this Plan for specific steps during each stage of the project lifecycle to ensure compliance with Federal Requirements.



# **Civil Rights**

PennDOT remains committed to ensuring that the NEVI Program is compliant with state and federal civil rights laws-including Title VI of the Civil Rights Act and accompanying USDOT regulations, the Americans with Disabilities Act (ADA) act, and Section 504 of the Rehabilitation Act. PennDOT will carefully assess eligible Submissions seeking NEVI funding for compliance with Civil Rights requirements and require routine reporting.

PennDOT's Agreement terms and conditions, pre-construction activities, equipment purchase and construction phase, and operations and maintenance phase will also ensure compliance with applicable law. PennDOT remains committed to nondiscrimination, inclusivity, equal access for all, and ensuring compliance with State and Federal civil rights laws and regulations.

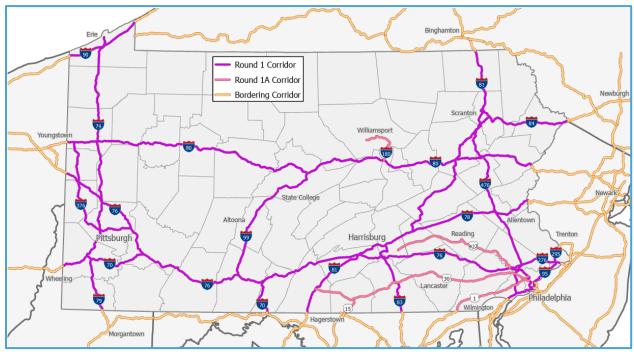


# **Existing and Future Conditions Analysis**

This section includes updated information on existing and future conditions for EV charging along AFCs in Pennsylvania. Please refer to the original 2022 plan for information on Pennsylvania's geography, terrain, and climate information.

#### Alternative Fuel Corridor (AFC) Designations

Since the AFC program began in 2016, PennDOT has successfully nominated 11 out of 12 of PA's primary interstate highways as AFCs for EV charging, plus six auxiliary interstates freeways and portions of four US highways. Figure 1 shows the Commonwealth's AFC EV corridors through seven rounds of nominations (2016-2023). In June 2023, as part of its AFC Round 7 submission, PennDOT nominated one additional auxiliary interstate highways as an EV AFC, I-180 from I-80 to Williamsport. This nomination is pending approval by USDOT.



\*I-180, shown as a Round 1A corridor, will only be considered in NEVI Round 1A if designated as an AFC in AFC Round 7

Figure 1. EV AFCs in Pennsylvania

## **EV Ownership and Registrations**

PennDOT continues to track EV ownership through information collected by Pennsylvania Driver and Vehicle Services. In 2022, there were nearly 43,000 battery EVs registered in the state, a nearly 82% increase from 2021 which followed a 55% increase from 2020. Although the total portion of EVs is still well less than 1% of the total fleet, trends of EV sales and EVSE installations show that this number will likely be eclipsed within the next few years. Table 6 provides annual registrations of EVs since 2015. An updated VIN decoding method was initiated in 2022 and



completed in March 2023, meaning current numbers better reflect the total EVs registered in Pennsylvania. Data from 2015 through 2021 was self-reported and likely missed some registrations.

Table 6. Summary of EV Registrations by Year

Year	Registered EVs (total)	Registered EVs (%)	Total State Registrations
2015	2,773	0.03	10,373,977
2016	3,599	0.03	10,423,779
2017	4,364	0.04	10,192,351
2018	7,694	0.07	10,356,982
2019	10,875	0.11	10,300,995
2020	15,205	0.15	10,272,155
2021	23,487	0.23	10,324,483
2022	42,785	0.40	10,730,611

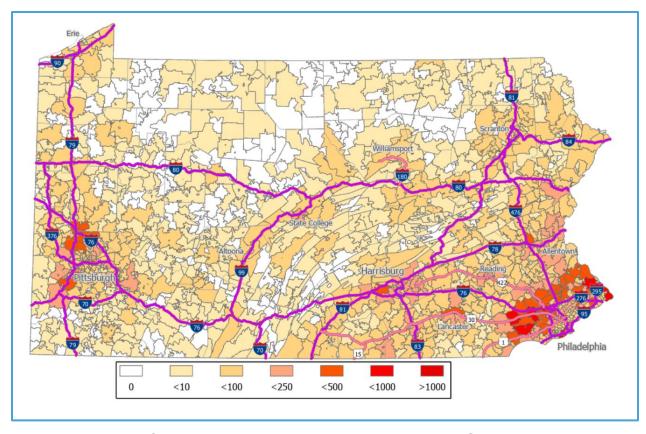


Figure 2. Number of Electric Vehicle Registrations in PA by Zip Code - June 2023



## Existing Charging Stations (as of July 2023)

According to the Alternative Fuels Data Center (AFDC), there are currently 173 active public DCFC stations in Pennsylvania with 822 charging ports and 1,249 active public Level 2 charging stations with 2,643 charging ports. There are 106 existing or planned DCFC stations within 1 mile of an AFC. Of this 106, 15 meet NEVI charging requirements and 91 have the potential to be upgraded and included as a NEVI compliant station.

About half of these 91 DCFC stations include Combined Charging System (CCS) ports. Tesla's North American Charging Standard (NACS) chargers make up the remaining stations. Tesla and FHWA are currently working on methods to accept some of these stations as NEVI-compliant with potential modifications in the future. PennDOT continues to monitor the adoption of the NACS charging port by many automakers and will continue to work with EVSE providers to work on technical provisions and funding information for the addition of NACS ports along with CCS ports for future NEVI funding rounds.

Appendix E documents Pennsylvania's existing and planned DCFC charging stations within 1 mile of AFC, as well as which existing EV charging stations are NEVI compliant in terms of power levels, port types, port numbers, and locations. PennDOT intends to work with the 13 existing compliant EV stations to gather and report all required NEVI Program information to credit these stations toward a fully build out certification as detailed in the June 2, 2023, Updated NEVI Program Guidance.

Additionally, the Pennsylvania Department of Environmental Protection (DEP) has recently selected two stations that will meet NEVI power and distance requirements and PennDOT is working with these stations to achieve NEVI-compliant status. There are also 13 planned DCFC stations funded by DEP that are along AFC but will not currently meet power and distance requirements and could be upgraded in the future.

**Table 7** lists the 13 existing NEVI compliant EV stations, two planned NEVI compliant EV stations, and three stations that are NEVI compliant except for the 1-mile requirement. All 106 current and planned DCFC stations that are within a mile of an AFC based on AFDC and DEP data as of July 2023 are included in **Appendix E**. **Figure 3** displays all 106 stations on a map with AFC corridors and an interactive version of this map is available on the PennDOT EV website.

Table 7. Existing and Planned DCFC Stations in Pennsylvania within 1 mile of AFCs

Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
900000	I-76 (28) I-79 (77)	1329 Freedom Rd Cranberry Township, PA 16066	4	Electrify America	Yes	Yes
Planned	I-76 (112) I-70 (112)	327 Industrial Park Rd Somerset, PA 15501	8	Applegreen Electric	Yes	Yes
167187	I-76 (146) I-70	4354 Business 220 Bedford, PA 15522	4	Electrify America	Yes	Yes



Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
	(146) I-99 (1)					
121756	I-76 (226)	1098 Harrisburg Pike Carlisle, PA 17013	4	Electrify America	Yes	Yes
121758	I-76 (328)	160 N. Gulph Rd, Suite 2700 King of Prussia, PA 19406	6	Electrify America	Yes	Yes
205089	I-76 (347)	2129 Oregon Ave Philadelphia, PA 19145	4	Electrify America	Yes	Yes
228666	I-76 (347)	2300 W Oregon Ave Philadelphia, PA 19145	9	EVgo	Yes	Yes
167623	I-80 (62)	63 Perkins Rd Clarion, PA 16214	4	Electrify America	Yes	Yes
168152	I-80 (308)	355 Lincoln Ave East Stroudsburg, PA 18301	4	Electrify America	Yes	Yes
168487	I-90 (24)	1825 Downs Dr Erie, PA 16509	4	Electrify America	Yes	Yes
236945	I-95 (20)	1100 S Christopher Columbus Blvd Philadelphia, PA 19147	4	Electrify America	Yes	Yes
201038	I-99 (69)	101 Valley Vista Dr State College, PA 16803	4	Electrify America	Yes	Yes
190383	I-276 (333)	500 W Germantown Pike Plymouth Meeting, PA 19642	4	Electrify America	Yes	Yes
Planned	I-476 (86)	256 Danner Rd Jim Thorpe, PA 18229	8	Applegreen Electric	Yes	Yes
188128	US-422 (337)	18 W Lightcap Rd Pottstown, PA 19464	4	Electrify America	Yes	Yes
121741	I-80 (101)	20 Industrial Dr DuBois, PA 15801	4	Electrify America	With Exception	Yes
202564	I-81 (185)	454 N 8th Ave Scranton, PA 18503	4	Electrify America	With Exception	No
193508	I-95 (35)	1455 Franklin Mills Cir Philadelphia, PA 19154	4	Electrify America	With Exception	No





Figure 3. Map of Existing and Planned DCFC Stations in Pennsylvania within 1 mile of **AFCs** 



# **EV Charging Infrastructure Deployment**

#### **Planned Charging Stations**

#### Implementation Strategy

PennDOT's use of FFY22 and FFY23 NEVI funds will focus on building out Pennsylvania's EV AFCs. Additional EV charging sites beyond those required to meet fully built out requirements will be identified on an on-going basis. After FHWA has certified Pennsylvania's AFCs as fully built out to NEVI-compliant standards, PennDOT will shift to expanding the NEVI Formula Program funding to fund right-sized EV charger deployments to Pennsylvania's community charging.

#### Deployment Focus Area and Funding Strategy

The EV Mobility Plan, released in July 2022, is PennDOT's overall plan for EV charging between 2023 and 2027. Figure 4 shows a summary of the objectives and goals of the EV Mobility Plan.

The NEVI Plan is meant to support several objectives of the EV Mobility Plan. EV infrastructure deployment under the NEVI Program is anticipated to include the following key focus areas:

- Assure the current and future AFC network is fully built out with DCFC stations,
- Provide redundancy at high-volume interchanges and reduce the gap in charging along AFCs,
- Expand the DCFC network on routes of significance,
  - Other freeways and interstate look-alikes,
  - Arterial routes with high traffic volumes, typically in suburban areas of the commonwealth's metropolitan areas,
  - Long distance rural and remote arterials far from the AFC network, and
  - Routes that serve disadvantaged populations and census tracts,
- Expand access to Level 2 charging and DCFC options at destinations and within communities,
- Provide charging at mobility hubs which offer a density of travel options combined with public, commercial, and/or residential amenities, and
- Provide megawatt charging infrastructure to support heavy- and medium-duty freight movement including regional travel, rural deliveries, and/or emergency travel.

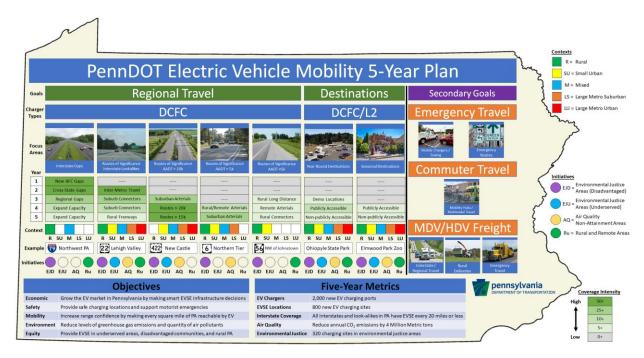


Figure 4. Priority Focus Areas for EV Deployment in PA (From EV Mobility Plan)

Source: PennDOT EV Mobility Plan

PennDOT plans to utilize the funding in a series of at least four rounds of competitive grant funding with goals aligned with the focus areas listed at the beginning of this section.

Each year, PennDOT will update this plan and annual targets based on how far along the AFC network is to being fully built out. It is also important to highlight that funding carries over from one year to the next.

PennDOT will place an emphasis on Justice40 guidelines throughout the program, reporting on how 40 percent of NEVI funds benefit disadvantaged communities (DACs). AFC installations have a modest focus on Justice40, as the focus on disadvantaged census tracts is limited by the geographical restriction of freeway interchange locations. After achieving fully built out AFC status, PennDOT will specifically focus on locating EV charging stations in DACs to specifically address additional equity priorities.

#### Planning Towards a Fully Built Out Determination

To address AFC gaps, PennDOT set up Round 1 of funding to focus on Pennsylvania's primary and auxiliary interstate AFC network. This includes 11 primary interstates and six auxiliary interstates, with each separated into groups of interchanges (exit numbers) called Corridor Groups. PennDOT has developed an online map showing the 84 Corridor Groups, which are labeled as Priority I, II, or III. More information on Priority Corridor Groups is available in the Pennsylvania NEVI - Anticipated Funding Round 1 - Interchange Information map.

- Priority I Corridor Groups (40) included interchanges that had been selected through a gap analysis to most likely satisfy the 50-mile interval required for an AFC to be fully built out.
- Priority II Corridor Groups (30) included interchanges that are in locations closer to existing sites and/or more likely to be redundant when ensuring 50-mile intervals are filled on the AFCs.
- Priority III Corridor Groups (14) included an interchange that already had an existing NEVIqualifying EV charging site. These sites are considered for redundancy purposes once the AFCs are all fully built out.

PennDOT plans to fill as many Priority I Corridor Groups as possible with Round 1 funding. Once sites are conditionally selected for Round 1 funding, an updated analysis will be performed for Round 1A. This included reevaluating all remaining gaps, accounting for updated guidance to provide charging within 25 miles of AFC ends and ensuring all logical paths of travel along AFCs do not have gaps. Any new gaps will be prioritized for funding in Round 1A.

As AFC gaps are filled, PennDOT may also identify priority exit locations for AFC redundancy, including DACs, rural areas, key interchanges, and areas where there may be untapped demand due to a large percentage of people living in multi-family housing without home-charging access.

Table 8 shows the termini of all AFCs in Pennsylvania. Most of these corridors continue into other states and will need to meet the 50-mile guidance between the Pennsylvania station and the station in the adjacent state. Pennsylvania will continue to coordinate with neighboring states to ensure the 50-mile requirements are met. There are four instances noted in Table 8 where the AFC terminates in Pennsylvania and an EV charging site must be located within 25 miles of the end point of the AFC.



Table 8. AFC Termini Analysis for 25-mile Requirement

AFC Corridor	South/West End	North/East End	25-mi Requirement?
I-70	I-70 in WV	I-70 in MD	No
I-76	I-76 in OH	I-76 in NJ	No
I-78	I-81 in PA	I-78 in NJ	No
I-79	I-79 in WV	Bayfront Parkway in PA (non-AFC)	Yes - North end
I-80	I-80 in OH	I-80 in NJ	No
I-81	I-81 in MD	I-81 in NY	No
I-83	I-83 in MD	I-81 in PA	No
I-84	I-81 in PA	I-84 in NY	No
I-90	I-90 in OH	I-90 in NY	No
I-95	I-95 in DE	I-95 in NJ	No
I-99	I-70 / I-76 in PA	I-80 in PA	No
I-180	I-80 in PA	US-220 in PA (non-AFC)	Yes - North end
I-276	I-76 in PA	I-95 in PA	No
I-376	I-80 in PA	I-76 in PA	No
I-476	I-95 in PA	I-81 in PA	No
I-295	I-95 in PA	I-295 in NJ	No
US-1	US-1 in MD	I-76 in PA	No
US-15	US-15 in MD	US-30 in PA	No
US-30	I-81 in PA	US-30 / I-676 in NJ	No
US-422	US-322 in PA (non- AFC)	US-202 in PA (non-AFC)	Yes - Both end

## Other Deployment Target Areas After AFCs are Fully Built Out

The primary objective in using NEVI formula funds is to reach fully built out status for existing AFC corridors. Once this is completed, then any public location may become eligible for funding.

I-180 has been added as a new AFC in Round 7 of AFC designation in 2023 (pending approval at time of this plan update). This route serves Williamsport, the largest PA urbanized area not currently served directly by an AFC. This 29-mile segment will require at least one charging station and gives the ability to serve US-15 and the City of Williamsport, in addition to filling out the AFC corridor. A site on this route will be a priority for Round 1A of NEVI funding. PennDOT will continue to consider the nomination of additional corridors as AFCs, soliciting the input of stakeholders such as Clean Cities, metropolitan planning organizations (MPOs), other planning partners and the public.

All evaluations of additional corridors for future deployment will include coordination with state, regional, and local stakeholders. PennDOT has coordinated with adjacent states in past AFC nomination rounds and will continue those discussions throughout the NEVI Formula Program period. PennDOT also holds regular meetings with MPOs/rural planning organizations (RPOs) throughout the state to identify regional and local priorities for charging infrastructure.

PennDOT is also assessing DCFC charging needs on the remaining auxiliary interstate routes, and other routes of significance across the commonwealth. Table 9 identifies several key corridors that have been identified as candidates for future AFC nominations. This list will continue to evolve through discussions with stakeholders and planning partners and will be updated annually along with the rest of the NEVI State Plan. Recent public comments have noted additional routes for consideration including PA 100 (Allentown), PA 28 (near Pittsburgh), and extending US 30 from Chambersburg west. Even if not nominated formally as an AFC in future rounds, these corridors can also serve as priority non-AFC locations for new DCFC infrastructure under the NEVI Formula Program once fully built out certification is achieved.

Table 9. Sample of Potential Corridors for AFC Designation or Charging Deployment

Route Corridor	From	То	Mileage	Population Centers Included	Existing Public DCFC or Tesla Station Near Corridor	Reason
US 222	MD Border (Lancaster County)	I-78 (Lehigh County)	88	Lancaster, Reading, Allentown	No Stations	Links key cities that do not have direct interstate connection
US 22 / US 322	I-81 (Dauphin County)	I-99 (Centre County)	84	Harrisburg, Lewistown, State College	No Stations	Provides connection between Harrisburg and State College (supports events at Penn State)
US 6	US 11 (Lackawanna County)	US 19 (Erie County)	270	Towanda, Mansfield, Wellsboro, Warren	1 Tesla	PA scenic route supporting long distance travel and no nearby AFCs in this region
US 15	US-30 (Adams County)	PA-581 (Cumberland County)	31	Gettysburg, Mechanicsburg	2 DCFC	Key north-south corridor serving longer distance travel including freight movement. US 15 through Harrisburg is not included since serves more local travel.
US 15	US 22/322 (Dauphin County)	PA-147 (Snyder County)	32	Harrisburg, Selinsgrove	1 Tesla	Key north-south corridor serving longer distance travel including freight movement. US 15 through Harrisburg is not included since serves more local travel.
US 15	I-180 (Lycoming County)	NY Border (Tioga County)	62	Williamsport, Mansfield	No Stations	Key north-south corridor serving longer distance travel including freight movement. US 15 through Harrisburg is not included since serves more local travel.



Route Corridor	From	То	Mileage	Population Centers Included	Existing Public DCFC or Tesla Station Near Corridor	Reason
US 219	MD Border (Somerset County)	NY Border (McKean County)	197	Somerset, Johnstown, Dubois	1 Tesla	Key north-south rural corridor serving longer distance travel.
US 22	I-99 (Blair County)	I-76 (Allegheny County)	76	Altoona, Blairsville, Monroeville	No Stations	Provides longer distance connection from Altoona



# **Implementation**

PennDOT's overall implementation strategy for the following remain unchanged from the 2022 NEVI State Plan: ensure ongoing operations and maintenance of EV charging infrastructure and data collection and sharing requirements, promote strong labor, safety, training, and installation standards as well as opportunities for the participation of small businesses, address emergency and evaluation needs, snow removal and seasonal needs, and ensure resilience for operation during emergencies and extreme weather. PennDOT has identified the installation, maintenance, and ownership responsibilities as part of the Funding Opportunity:

#### 1. Installation Responsibilities:

- a. PennDOT or its designated representative is responsible for overseeing the installation process and ensuring compliance with relevant regulations and standards.
- b. Contractors awarded funding through the NEVI Program are responsible for the physical installation of the charging stations and associated infrastructure.

#### 2. Maintenance Responsibilities:

- a. Contractors are primarily responsible for ongoing maintenance of the charging stations throughout their lifecycle.
- b. Regular preventive maintenance, such as cleaning, software updates, and equipment checks, is the responsibility of the EVSE operators or their contracted maintenance teams.



c. PennDOT may conduct periodic inspections or audits to ensure that maintenance is carried out effectively and in accordance with the agreed-upon maintenance plan.

#### 3. Ownership Responsibilities:

- a. The ownership of the charging infrastructure typically lies with the recipients who were awarded funding through the NEVI Program.
- b. As owners, the Contractors are responsible for any necessary upgrades or replacement of charging equipment during the performance period and lifecycle of the charging stations.
- c. PennDOT will set ownership and usage terms in the contracts with the awarded parties to ensure long-term sustainability and adherence to program goals.

At the time of the publication of this NEVI Plan update, PennDOT's competitive program is still open, but PennDOT plans to ensure implementation compliance during each phase of NEVI Program administration as detailed in Table 10.

Table 10. PennDOT's Plans for NEVI Implementation Phase Compliance

Phase	Process for Federal & State Program Compliance				
Submission Requirements	<ul> <li>Equipment Specifications and Design: Prospective Contractor required to follow 23 CFR 680 and submit equipment specifications, preliminary site design, and utility power service information.</li> </ul>				
	<ul> <li>Labor, Safety, and Installation Standards: Prospective Contractor required to follow 23 CFR 680 and submit information on team qualifications including EVITP certification.</li> </ul>				
	<ul> <li>Installation, Operation, and Maintenance: Prospective Contractor required to submit narrative and information describing plan for installation, operation, and maintenance compliance.</li> </ul>				
	<ul> <li>Interoperability, Data Collection, and Reporting: Prospective Contractor required to submit signed "Certification" form detailing their adherence to all 23 CFR 680 and NEVI requirements.</li> </ul>				
Submission	Equipment Specifications and Design: PennDOT evaluation for compliance.				
Review and Evaluation	• Labor, Safety, and Installation Standards: PennDOT reviews Submission compliance.				
Process	• Installation, Operation, and Maintenance: PennDOT reviews Submission compliance.				
	<ul> <li>Interoperability, Data Collection, and Reporting: PennDOT reviews Submission compliance.</li> </ul>				
Agreement	• Equipment Specifications and Design: Contractor contracted for 23 CFR compliance.				
Contractual Terms and Conditions	• Labor, Safety, and Installation Standards: Contractor contracted for 23 CFR compliance.				
and Conditions	• Installation, Operation, and Maintenance: Contractor contracted for 23 CFR compliance.				
	• Interoperability, Data Collection, and Reporting: Contractor contracted for compliance.				
Pre-Construction Activities Phase	<ul> <li>Equipment Specifications and Design: PennDOT review, NEPA clearance, Notice to Proceed.</li> </ul>				
	• Labor, Safety, and Installation Standards: Contractor provides proof of certified labor team.				
	• Installation, Operation, and Maintenance: Contractor updates compliance plans as needed.				
	<ul> <li>Interoperability, Data Collection, and Reporting: PennDOT and Contractor review NEVI requirements.</li> </ul>				



Phase	Process for Federal & State Program Compliance
Equipment Purchase and	<ul> <li>Equipment Specifications and Design: PennDOT provides NTP, Contractor buys approved equipment.</li> </ul>
Construction Phase	<ul> <li>Labor, Safety, and Installation Standards: Certified electricians safely install equipment.</li> </ul>
	• Installation, Operation, and Maintenance: PennDOT inspects, issues Notice of Acceptance.
	<ul> <li>Interoperability, Data Collection, and Reporting: Five-year O&amp;M and reporting begin.</li> </ul>
Operations and Maintenance	<ul> <li>Equipment Specifications and Design: Contractor reports on compliance, PennDOT reviews.</li> </ul>
Phase	<ul> <li>Labor, Safety, and Installation Standards: Contractor reports on compliance, PennDOT reviews.</li> </ul>
	<ul> <li>Installation, Operation, and Maintenance: Contractor reports on compliance, PennDOT reviews.</li> </ul>
	<ul> <li>Interoperability, Data Collection, and Reporting: Contractor reports on compliance, PennDOT reviews.</li> </ul>



# **Equity Considerations**

PennDOT is committed to enacting the goals outlined in Executive Order 14008 relating to Justice 40 by ensuring disadvantaged communities receive 40 percent of the benefits of NEVI formula funds and will work closely with the agency's public involvement team to perform equity focused outreach, engagement, and planning throughout the NEVI Formula Program period.

## Identification and Outreach to Disadvantaged Communities

PennDOT will identify and reach out to DACs in the state to implement the NEVI Program through a comprehensive and proactive approach. This includes:

- 1. Data Analysis: PennDOT will conduct a thorough analysis of demographic and socioeconomic data to identify areas that qualify as DACs based on criteria such as income levels, minority population, environmental burdens, and other indicators.
- 2. Environmental Justice Mapping: PennDOT will utilize two primary environmental justice mapping tools to pinpoint locations with potential disparities in access to transportation infrastructure and services, including EV charging. USDOT updated their definition for DACs in 2023 and released the data as part of the new ETC explorer tool.

The ETC tool has two versions, one based on a national comparison, and one based on a state-only comparison. Additionally, the CEJST provides additional information on DACs. PennDOT has integrated the ETC and CEJST DACs into the layers mapped on their EV website and the data will support current and future scoring criteria for prioritizing Submissions for funding and guide targeted outreach efforts.



Figure 5 shows the Justice40 environmental justice areas that will be utilized by PennDOT using the ETC and CEJST tools. For Round 1 scoring, a site was considered a DAC as long as the location was within 0.5 miles of the ETC national, ETC state, CEJST DAC defined census tracts. Both tools offer more detailed categories that go into the DAC designation, and these categories will be explored to do a more nuanced comparison of potential sites for Round 2 and beyond.

The ETC state definition categorizes 35% of census tracts, 43% of land area, and 34% of the population within a DAC.

The ETC national definition categorizes 36% of census tracts, 31% of land area, and 34% of the population within a DAC.

The CEJST definition categorizes 27% of census tracts, 21% of land area, and 24% of the population within a DAC.

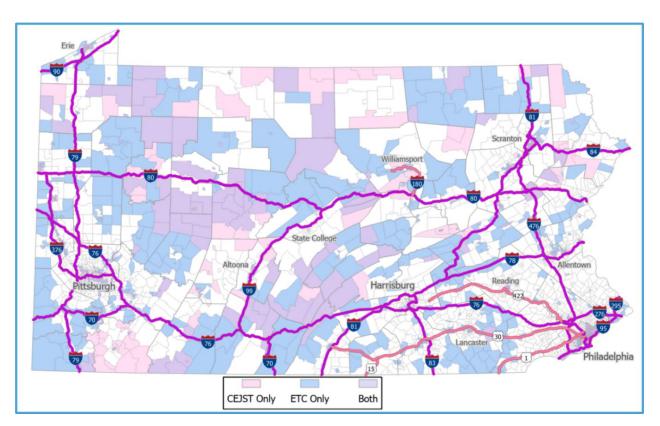


Figure 5. PA Environmental Justice Areas / Disadvantaged Communities (Using ETC and CEJST)

Source: USDOT ETC EXPLORER, CEQ CEJST SCREENING TOOL

3. Community Engagement: PennDOT will actively engage with community-based organizations, advocacy groups, and local leaders in DACs to understand their needs, concerns, and priorities related to EV infrastructure.

- 4. Public Meetings and Workshops: PennDOT will hold public meetings and workshops in DACs to gather input, address questions, and share information about the NEVI Program and its potential benefits to the community.
- 5. Multilingual Outreach: PennDOT will ensure that outreach materials and communication are provided in multiple languages to facilitate engagement with diverse communities.
- Equitable Distribution of EV Charging Stations: PennDOT will strategically plan the placement of charging stations to ensure equitable access and coverage in DACs, aiming to reduce transportation-related disparities.
- 7. Incentivize Funding Opportunities for DACs: PennDOT may incentivize Projects in DACs and encourage active participation from local stakeholders.
- 8. Collaboration with Community-Based Organizations: PennDOT collaborates with community-based organizations in DACs to empower and involve the community in decision-making processes related to EV infrastructure development.

By employing these strategies, PennDOT aims to implement the NEVI Program in an inclusive and equitable manner, ensuring that disadvantaged communities have the opportunity to benefit from the advancement of EV infrastructure and clean transportation solutions.

### Identifying, Quantifying, and Measuring Benefits to Pennsylvania **Disadvantaged Communities**

The process to identify, quantify, and measure benefits to DACs under the NEVI Program will be thorough, community and data-driven, and incorporate the following elements:

- 1. Benefit Identification: Based on the identified NEVI Program goals, PennDOT has identified the following benefits to measure for this Project:
  - a. Improve clean transportation access through the location of chargers,
  - b. Reduce transportation energy cost burden by enabling reliable access to affordable charging,
  - c. Reduce exposures to transportation emissions, and
  - d. Increase the clean energy job pipeline, job training, and enterprise creation in
    - These identified benefits will be validated and refined during PennDOT's DAC outreach meetings.
- 2. Metric Selection: For each identified benefit, specific metrics will be selected to measure progress and impact. Refer to Table 11 for the identified metrics for each of the identified benefits.
- 3. Data Sources and Analysis Methods: PennDOT will utilize various data sources including census data, transportation data, and charging station usage data—to track and analyze the selected metrics.

- 4. Establishing Baseline and Goals: PennDOT will establish a baseline for each benefit area using existing data to understand the current state before NEVI Program implementation. Clear and measurable goals will be set to track progress and evaluate the success of the program in benefiting DACs.
- 5. Community Engagement: Communities in DACs will be actively engaged throughout the process to validate the receipt of benefits. PennDOT will conduct public meetings, workshops, and surveys to gather feedback and ensure that the benefits are aligned with the community's needs and priorities.
- 6. Mapping Benefits to DACs: To ensure equitable distribution, PennDOT will utilize tools like the USDOT ETC and CJEST and other geographic information systems (GIS) to map the location of EV charging stations and their associated benefits in relation to DACs.
- 7. Periodic Reporting: PennDOT will provide annual updates that outline the progress made in benefiting DACs.

**Table 11. Benefits Categories** 

Benefit Category	Metrics	Data Sources	Analysis Methods	Baseline	Goals
Improve Clean Transportation Access	Number of chargers in DACs	Charging station database	Data analysis and mapping	Existing charging stations	Increase chargers in DACs
Improve Clean Transportation Access	Metrics being evaluated	Charging station usage data	Data analysis and tracking	Existing charging sessions	Increase charging sessions in DACs
Reduce Energy Cost Burden	Metrics being evaluated	Charging station pricing data	Data analysis and comparison	Existing pricing	Decrease cost per kWh in DACs
Reduce Exposures to Emissions	Metrics being evaluated	Emission data	Data analysis and comparison	Existing emissions	Goals being evaluated
Reduce Exposures to Emissions	Metrics being evaluated	Vehicle registration data	Data analysis and tracking	Existing ICE vehicles	Goals being evaluated
Increase Clean Energy Jobs	Metrics being evaluated	Jobs data	Data analysis and tracking	Existing job data	Increase EV-related jobs in DACs
Increase Clean Energy Jobs	Number of job training programs in DACs	Training program data	Data analysis and tracking	Existing training programs	Increase job training in DACs
Increase Clean Energy Jobs	Metrics being evaluated	Business registry data	Data analysis and mapping	Existing business data	Increase EV-related businesses

Please note that the benefits categories, metrics, data source, analysis method, baseline, and goal are preliminary and will be validated and refined through PennDOT's outreach with the DACs.



By implementing this robust process, PennDOT aims to achieve meaningful and measurable benefits for DACs, in line with the White House Interim Guidance on Justice40 and the overarching goal of promoting equity, environmental justice, and community empowerment through the NEVI Program.



### Labor and Workforce Considerations

The NEVI Formula Program provides funding to grow and diversify the local workforce that supports the installation, operation, and maintenance of EV charging infrastructure. PennDOT is currently implementing the approach to improve the training, experience level, and diversity of the workforce installing and maintaining EV charging stations developed as part of the NEVI State Plan. As part of the approach, PennDOT is continuing to coordinate with Clean Cities, labor unions, and other stakeholders and educational agencies/institutions to better identify educational needs and opportunities related to EV infrastructure.

#### Qualified Technicians

PennDOT's NEVI Program will invest up to \$171.5M in federal funding for EV charging stations throughout Pennsylvania, generating demand for qualified electrical contractors and electricians to install, operate, and maintain these stations. Pennsylvania currently has a robust pipeline of union and non-union electrical training centers, and apprentice and journeymen programs that provide training to supply needed electrical workforce to meet the state's growing demand.

Pennsylvania requires no state license to perform electrical work. However, counties and cities have their own licensure and certification processes ensuring all electricians working in the field have proper credentials, knowledge, and safety training to work on high voltage electrical systems. Many Pennsylvania licensed electricians have sought and received EVSE-specific training and certification through the Electric Vehicle Infrastructure Training Program (EVITP).

EVITP certification is currently required under 2023 NEVI competitive program, as stipulated under 23 CFR 680.106 (j). The EVITP curriculum is an 18-hour course (available in-person or online), that provides training and certification for electricians installing EVSE charging stations. The EVITP website indicates that Pennsylvania currently has more than 45 electrical contracting companies throughout the state with electricians on staff that are EVITP-certified. This number can scale up quickly through the online EVITP course to meet the state's growing demand for EVSE-trained electricians.

### Procurement and Contracting

PennDOT's NEVI Funding Opportunity requires Prospective Contractors demonstrate fulfillment of all Federal statutory requirements including ensuring the workforce installing, maintaining, and operating chargers has appropriate licenses, certifications, and trainings in compliance.



PennDOT will confirm compliance during the Submission evaluation prior to awarding any Project NEVI Formula Program funds. Following any notice of award, Agreements with Contractor awarded NEVI Formula Program funding will include, and expressly incorporate by reference, compliance with PennDOT's additional NEVI Program Safety Requirements and all 23 CFR labor and safety requirements, including requiring EVITP certified installers, compliance with Davis-Bacon, and compliance with all other federal and state labor safety statutes.



# **Physical Security & Cybersecurity**

PennDOT is committed to overall safety and security aspects of the NEVI Program. The safety and security features required by the NEVI Program are comprehensive and designed to protect all stakeholders. Physical and cybersecurity updates in Pennsylvania's NEVI Program include compliance with 23 CFR 680, and the expansion of state requirements to provide a robust, safe, and secure EV charging infrastructure network across the state as outlined below.

#### Physical Security and Safety

The NEVI Program includes physical security and safety in all project phases, from proposal Submission through five-years of required O&M. Physical security strategies for EV charging stations encompass several aspects to ensure the safety and protection of users, equipment, and infrastructure. Here are specific strategies for each of the mentioned topics:

- 1. Lighting: EV charging stations in Pennsylvania are anticipated to have adequate lighting around EV charging stations to enhance visibility and deter potential criminal activities during nighttime. Illuminated areas create a safer environment for users and discourage trespassing or vandalism.
- 2. Siting and Station Design for Visibility: EV charging stations in PA are expected to be easily accessible. Pennsylvania will ensure that the stations are positioned in open and visible areas to promote a sense of safety.
- 3. Driver and Vehicle Safety: EV charging stations are expected to have instructions to guide users in safely connecting and disconnecting their vehicles to the EVSE charging stations. Additionally, EV charging stations are expected to have clear markings and designated EV parking spaces to prevent potential hazards and facilitate safe charging procedures.
- 4. Video Surveillance: Contractors will be encouraged to install security cameras in and around charging station areas to monitor activities and act as a deterrent against theft or vandalism.

- 5. Emergency Call Boxes: Contractors may install emergency call boxes near the EVSE charging stations, allowing users to seek immediate assistance in case of any safety or security emergencies.
- 6. Fire Prevention: Contractors will be encouraged to include fire safety measures as part of their EVSE charging station, including training local fire fighters and emergency response staff. These measures include fire extinguishers, design with fire-resistant materials, and a fire department emergency power disconnect within 50 feet of the EVSE charging station. Charging equipment will be installed as per the latest National Electric Code and National Fire Protection Association standards. A fire department emergency power disconnect may be provided within 50 feet of the EV charging station.
- 7. Charger Locks: EVSE charging stations will be equipped with locks or secure enclosures (cabinets) to prevent unauthorized access and tampering with the charging equipment.
- 8. Preventing Tampering and Illegal Surveillance of Payment Devices: EVSE charging stations will include security design features to remain tamper-resistant and vandalism-resistant, such as tamper-resistant screws, anti-vandalism hardware, locked enclosures, and graffiti-resistant coating or paint. PennDOT will require secure payment systems and encryption technologies to safeguard payment devices from tampering and unauthorized access.

Overall, a combination of these physical security strategies will contribute to a secure and userfriendly environment for EVSE charging stations, encouraging widespread adoption of EVs and supporting sustainable transportation infrastructure.

### Cybersecurity and Safety

Agreements with Contractors under PennDOT's NEVI Funding Opportunity include explicit reference to and incorporation of PennDOT's NEVI Program Requirements, which complement Part 680 of the NEVI Program Standards and Requirements specified in the FHWA Final Program Rule. These additional requirements outlined by PennDOT focus on EVSE Cybersecurity.

Contractor will be required to submit the Cybersecurity Plan following the final Agreement. The Cybersecurity Plan should address cybersecurity strategies for user identity and access management, cryptographic agility and support of multiple Public Key Infrastructures, monitoring and detection, incident prevention and handling, configuration, vulnerability, and software update management, third-party cybersecurity testing and certification, and continuity of operation when communication between the charger and charging network is disrupted. This Cybersecurity Plan should detail potential risks and protective measures throughout the contracted lifetime of the Project. Contractors must annually provide evidence of adherence to and updates to the Cybersecurity Plan to PennDOT. The Cybersecurity Plan must outline how the Contractors will ensure data information encryption aligns with the guidelines set forth by the National Institute of Standards and Technology.

The Agreement will require all individuals involved in the operation and maintenance of the Project, with access to equipment and data, must be located within the United States and adhere to all aspects of the Project's Cybersecurity Plan.



To ensure compliance and security, independent audits will be conducted at least annually.

PennDOT will ensure that its contracts with any parties awarded NEVI funding, as well as its internal handling of data, comply with Pennsylvania's IT cyber security policies. Additionally, PennDOT will continue to monitor and incorporate any additional cybersecurity requirements introduced through the NEVI Program final rulemaking process. These stringent cybersecurity measures aim to safeguard EV charging stations and data, ensuring a secure and reliable EV charging network.



# **Program Evaluation**

PennDOT will use a comprehensive monitoring and reporting system to track the progress and effectiveness of the statewide NEVI funded EVSE charging stations. This plan will be updated annually to address opportunities for improvement.

PennDOT's NEVI Funding Opportunity engages local and national market players, contractually obligating them to comply with NEVI Program standards. Contractors will adhere to EVSE standards and submit quarterly and annual data to the USDOT platform for meaningful program evaluation. PennDOT will adhere to one-time data submission.

PennDOT will assess the performance of EV chargers based on data submitted through the process prescribed by FHWA—evaluating efficiency, distribution, and accessibility. The success of chargers in supporting clean transportation, reducing energy costs, and improving air quality will also be measured.

Data analysis will identify gaps and areas needing enhancement, guiding data-driven decisions for infrastructure improvements. Public engagement and feedback through surveys and forums will ensure user satisfaction and identify areas requiring adjustments.

Annual progress reports will provide transparency to the public. The data-driven approach and stakeholder engagement will continually inform updates to the statewide EVSE charging station deployment plan, ensuring its efficiency, accessibility, and responsiveness to citizens and visitors. PennDOT's commitment to regular monitoring, reporting, and improvements will maintain a robust and effective EV charging infrastructure throughout the Commonwealth.

Currently, PennDOT is actively engaged in the Round 1 submission evaluation process and has no data to report. Reporting will adhere to regulatory requirements, ensuring transparency and accountability in evaluating and implementing the NEVI Program.



# **Discretionary Exceptions**

Exception #	Туре	Distance of Deviation	Corresponding AFC	Reason for Exception Request
1	1 mile from exit	0.8 miles	I-80	Geography



Figure 6. Map of Exception 1 with Inset

Source: ERSI

After careful evaluation of Round 1 Submissions, PennDOT has identified one location to seek an exception from FHWA regarding the fully built out AFC requirements based on geographic criteria. Specifically, PennDOT requests permission to count the existing Electrify America station located at 20 Industrial Drive, DuBois, PA 15801, even though it is located approximately 1.8 miles from the exit. PennDOT believes that granting this exception is justified for the following reasons:

1. Minimal Impact on Travel Time: The existing station in DuBois is conveniently situated between the two DuBois exits from I-80, along a parallel route. I-80 travel time between Exits 97 and 101 is 4 minutes at 4.6 miles. Travel time through DuBois along the parallel route is 9 to 11 minutes at 5.3 miles.

- 2. Limited Interest in the Area: During our Round 1 solicitation process, PennDOT received minimal interest from Prospective Contractors in this region, potentially due to the presence of the existing station. By allowing PennDOT to count this station, PennDOT can avoid duplicating infrastructure in an area, optimizing the allocation of resources.
- 3. Economic Viability: Having two charging stations in close proximity to each other while EV adoption is low may result in reduced economic viability for both stations. By considering the existing station in DuBois, we can ensure the long-term sustainability and financial viability of the EV charging infrastructure in the region.

PennDOT believes that granting this exception will lead to a more efficient and effective deployment of EV charging infrastructure in the DuBois area, considering the existing infrastructure and the unique circumstances of the location. PennDOT will continue to seek more EV charging station options near the DuBois area in later funding rounds.



# Appendix A. Acronyms and Definitions

#### Acronyms

Acronym	Definition
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AFDC	Alternative Fuels Data Center
AFC	Alternative Fuels Corridor
CCS	Combined Charging System
CEJST	Climate and Economic Justice Screening Tool
DAC	Disadvantaged Community
DCFC	Direct Current Fast Charger
DEP	Pennsylvania Department of Environmental Protection
EJ	Environmental Justice
ETC	Equitable Transportation Community
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
EVITP	Electric Vehicle Infrastructure Training Program
FFY	Federal fiscal year
FHWA	Federal Highway Administration
MPO	Metropolitan Planning Organizations
NACS	North American Charging System
NASEO	National Association of State Energy Officials
NASTO	Northeast Association of State Transportation Officials
NEVI	National Electric Vehicle Infrastructure
NTP	Notice to Proceed
O&M	Operations and Maintenance
PennDOT	Pennsylvania Department of Transportation
PUC	Public Utilities Commission
RPO	Rural Planning Organizations
USDOT	United States Department of Transportation

#### **Definitions**

Term	Definition
Agreement	The fully executed version of the grant Agreement in the eGrants Public Portal Interface, including all Commonwealth signatures (unless otherwise stated



Term	Definition
Buy America	Equipment used for EV charging must comply with both the Title 23 Buy America clause (23 U.S.C. § 313) and the Build America, Buy America Act (Pub. L. No 117-58, div. G §§ 70901–70927)
Contractor	The Prospective Contractor who, upon execution of the Agreement, is responsible for managing the awarded contract and to whom payment will be made
Corridor Group	a combination of the specific Alternative Fuel Corridor ("AFC") route number (e.g., I-76, I-79) and group letter (e.g., A, N) that represents a range of exits along the AFC where sites will be scored against each other
Electric Vehicle Supply Equipment	Devices that provide electric power to the vehicle and use that to recharge the vehicle's batteries. EVSE systems include the electrical conductors, related equipment, software, and communications protocols that deliver energy efficiently and safely to the vehicle
Notice of Acceptance	A written notification sent by PennDOT to the Contractor advising the acceptance of the installed EVSE
NEVI Funding Opportunity	All documents, whether attached or incorporated by reference, used for soliciting Submissions
Notice of Selection and Notice of Non-Selection	Notifications through the eGrants Public Portal Interface informing a Prospective Contractor that their site has either been selected or not selected to move forward for a Conditional Award
Notice to Proceed	Written authorization to the Contractor to proceed with the work in the Agreement
PennDOT	The Commonwealth of Pennsylvania, Department of Transportation and its contractors and consultants, as PennDOT determines
Period of Performance	The length of time during which a Contractor is obligated to provide Operations and Maintenance services for the EV charging site
Project	The EVSE hardware and all required support systems installed to create a charging station, including the entirety of the eligible costs
Prospective Contractor	The company (including authorized representatives of the company) who has signed and is submitting the signed Submission response and who will be responsible, if subsequently identified as the Contractor, to ensure proper performance of the Agreement awarded. The Prospective Contractor must be the organization that will own/lease and operate, or oversee the operations of, the charging stations during the Period of Performance of the charging site
Site Host	The owner of the physical location where the EV charging equipment is installed. The Site Host may be the same as the Prospective Applicant, or different. If different, a Site Host Agreement shall be established between the Prospective Contractor and Site Host
Submission	The Site Applicant's response to the NEVI Funding Opportunity (defined below) through the eGrants Public Portal Interface including all Submission materials and attachments
Uptime	The time during which the EVSE is functioning or able to function



# Appendix B. Stakeholder Engagement

This appendix includes dates and information on PennDOT's outreach and community engagement activities since last year's NEVI Plan approval.

#### List of NEVI and EV Outreach, Presentations, Meetings, and Activities

Date of Activity	Activity	Presentation Topic	Summary	Audience Type
July 27, 2022	County Commissioner Association of PA – Community & Economic Development Committee	IIJA / NEVI Overview	PennDOT provided an overview of IIJA and NEVI Program to County Commissioners	Governmental entities
August 16, 2022	Greater Wyoming Chamber of Commerce	NEVI / EV	PennDOT & DEP provided an overview of EVs, EV incentives and PA's NEVI Program.	Private sector/industry representatives
August 29, 2022	Western Region & Planning Partners Meeting	NEVI	PennDOT hosted a presentation and interactive discussion on PA's NEVI Program with PennDOT staff and the western region planning partners.	Governmental entities
August 30, 2022	City of Philadelphia, PECO, DVRPC	NEVI / EV Planning	PennDOT hosted an EV planning and collaboration meeting to discuss the PA NEVI Plan and EV deployment.	Utilities; Governmental entities
September 8, 2022	PA Municipal Electric Association Annual Conference	NEVI	PennDOT provided a presentation with EV education, PA EV incentives, federal incentives, and about PA's NEVI Program.	Governmental entities
September 12, 2022	Central Region & Planning Partners Meeting	NEVI	PennDOT hosted a presentation and interactive discussion on PA's NEVI Program with PennDOT staff and the central region planning partners.	Governmental entities
September 14, 2022	Mobilify & Manchester Citizen Corp Hosted – Duquesne Light/DEP – Community Engagement Session	NEVI	PennDOT, DEP, Duquesne Light, and Clean Cities hosted a community engagement session to educate about EVs, PA NEVI Program and collect feedback.	Urban, rural, and underserved or disadvantaged communities
September 15, 2022	Eastern Region & Planning Partners Meeting	NEVI	PennDOT hosted a presentation and interactive discussion on PA's NEVI Program with PennDOT staff and the eastern region planning partners.	Governmental entities



Date of Activity	Activity	Presentation Topic	Summary	Audience Type
September 22, 2022	Clean Energy Ministerial – Fleet Charging Roundtable	NEVI	PennDOT/DEP presented on PA's NEVI Program.	Private sector/industry representatives
September 26, 2022	DC-America EV Mobile Charging Intro	NEVI / EVSE intro	PennDOT met with DC America to learn more about Mobile charging capabilities.	Private sector/industry representatives
September 27, 2022	Southeastern Region & Planning Partners Meeting	NEVI	PennDOT hosted a presentation and interactive discussion on PA's NEVI Program with PennDOT staff and the southeastern region planning partners.	Governmental entities
October 3, 2022	PA Chapter of the American Planning Association Annual Conference	NEVI	PennDOT presented on PA's NEVI Program.	Private sector/industry representatives
October 5-6, 2022	EV Charging Conference in New York	NEVI	PennDOT presented on PA's NEVI Program.	Private sector/industry representatives
October 7, 2022	Pittsburgh Region Clean Cities – EV – Odyssey Day at CCAC	NEVI	PennDOT hosted a booth with information about PA's NEVI Program.	Private sector/industry representatives
October 12, 2022	PennDOT NEVI Pre- Announcement Press Release / Website Updates	NEVI	PennDOT issued a pre-announcement press release on the NEVI Program and website updates.	General public
October 12, 2022	Pennsylvania Petroleum Association Annual Conference (Hershey)	NEVI	PennDOT presented on PA's NEVI Program.	Private sector/industry representatives
October 13, 2022	PPL & PennDOT Stakeholder Engagement Allentown Session	NEVI / Utility Planning	PennDOT, PPL Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
October 14, 2022	PPL & PennDOT Stakeholder Engagement Harrisburg Session	NEVI / Utility Planning	PennDOT, PPL Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
October 15, 2022	PSAB Presentation – IIJA (NEVI) - Harrisburg	NEVI	PennDOT provided an overview of IIJA and NEVI Program to the PA State Association of Boroughs	Governmental entities



Date of Activity	Activity	Presentation Topic	Summary	Audience Type
October 18, 2022	Pathways to PennDOT DBE/SBE Conference (Harrisburg)	NEVI Contracting	PennDOT provided information about the NEVI Program and Submission process and resources to DBEs and SBEs.	Private sector/industry representatives
October 20, 2022	Drive Electric PA Coalition Meeting	NEVI Update	PennDOT provided an update and overview of the NEVI Program.	Private sector/industry representatives; Governmental entities
October 20, 2022	Fall Planning Partners Meeting	NEVI	PennDOT provided an update and overview of the NEVI Program.	Private sector/industry representatives; Governmental entities
October 21, 2022	AASHTO Fall Conference	NEVI	PennDOT provided an update and overview of the NEVI Program.	Governmental entities
October 24, 2022	PPL & PennDOT Stakeholder Engagement Columbia (Lancaster) Session	NEVI / Utility Planning	PennDOT, PPL Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
October 25, 2022	PPL & PennDOT Stakeholder Engagement Jessup - Scranton Session	NEVI / Utility Planning	PennDOT, PPL Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
October 26, 2022	Transportation Electrification Work Group – PECO	NEVI update/Utility planning	PennDOT – workgroup members	Utilities
October 31, 2022	Meeting with Rural Utility Co-op PREA	NEVI discussion	PennDOT; PREA Gov Relations	Utilities
November 1, 2022	PennDOT NEVI GRANT Pre-Announcement Webinar	NEVI Contracting	PennDOT hosted a webinar to provide information about the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives



Date of Activity	Activity	Presentation Topic	Summary	Audience Type
November 3, 2022	Duquesne Light & PennDOT Stakeholder Engagement Session	NEVI/Utility Planning	PennDOT, Duquesne Light Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
November 3, 2022	Fall MAC Meeting	NEVI	PennDOT provided an update and overview of the NEVI Program to representatives of statewide municipal associations.	Governmental entities
November 3, 2022	ZEV Task Force + Clean Vehicles Workgroup	NEVI/EV	Discussion on federal EV charging competitive grant programs – discretionary grant program and NEVI Formula Program.	Governmental entities
November 4, 2022	PA NEVI Plan & DEI	NEVI/Equity	Meeting with City of Harrisburg; American Assoc of Blacks in Energy; African American Chamber of Commerce; etc. to discuss PennDOT's approach to equity in the NEVI Plan.	Private sector/industry representatives; Governmental entities
November 9, 2022	Electric League of Western PA	NEVI	PennDOT presented the NEVI Program and EV funding opportunities.	Private sector/industry representatives
November 10, 2022	PPL & PennDOT Stakeholder Engagement Williamsport Session	NEVI / Utility Planning	PennDOT, PPL Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
November 14, 2022	Rural Co-Op Virtual Discussion	NEVI/Utility Planning	PennDOT met with the rural co-op utilities to discuss the NEVI Program and implementation/utility coordination needs.	Utilities
November 14, 2022	Clean Transportation Table (Mobilify) NEVI Update	NEVI	PennDOT presented on the NEVI Program and EV incentives in PA.	General public; Private sector/industry representatives
November 15, 2022	PECO NEVI Stakeholder Engagement Session - Montgomery Co Community College	NEVI/Utility Planning	PennDOT, PECO Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives



Date of Activity	Activity	Presentation Topic	Summary	Audience Type
November 17, 2022	Chester County TMACC – EV Conference	NEVI	PennDOT provided information on PA's state plan for EV mobility and the PA NEVI plan, site location considerations, and funding.	Representatives of the transportation and freight logistics industries; Private sector/industry representatives
November 22, 2022	PECO & EP-ACT – NEVI Stakeholder Engagement Session at DVRPC	NEVI/Utility Planning	PennDOT, PECO Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
December 1, 2022	FirstEnergy & PennDOT Stakeholder Engagement Session in Reading	NEVI/Utility Planning	PennDOT, FirstEnergy Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
December 7, 2022	Penn State: Transportation Engineering and Safety Conference	NEVI	PennDOT presented on the NEVI Program and EV incentives in PA.	Governmental entities
December 8, 2022	FirstEnergy & PennDOT Stakeholder Engagement Session in Clearfield	NEVI/Utility Planning	PennDOT, FirstEnergy Electric Utilities, DEP, and Clean Cities hosted a stakeholder engagement and business networking session to provide information about EV incentives, the PA NEVI Program and Submission process, utility coordination and support from other organizations available.	General public; Utilities; Private sector/industry representatives
April 23-26, 2023	PA State Association of Township Supervisors Conference	NEVI/EV Planning	PennDOT presented on the NEVI Program and EV incentives in PA.	Governmental entities



### **List of 2023 NEVI Program Presentations**

Date of Event	Event Name	Presentation Topic	Presentation Summary	Audience Type
January 12, 2023	TRB Annual Conference	PA NEVI Program Stakeholder Engagement	PennDOT presented information regarding PA's NEVI Program and stakeholder outreach activities and lessons learned.	Governmental entities; Representatives of the transportation and freight logistics industries
January 18, 2023	AASHTO/NASEO Regional EV Workshop – Northeast	EV/NEVI lessons learned and meeting kick-off	PennDOT and PA DEP provided the keynote opening presentations for the conference. The presentations focused on where we've been, lessons learned, and next steps on EV/NEVI policy.	Governmental entities
January 24, 2023	DTE NEVI Presentation	NEVI Program Update	PennDOT presented an update on the PA NEVI Program to the PennDOT District Traffic Engineers.	Governmental entities
February 1, 2023	ESWP EV Presentation	General EV and NEVI	Provided an introduction to electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives to the Engineers Society of Western PA.	Private sector/industry representatives
February 8, 2023	GVA TMA NEVI Presentation	NEVI and other EV incentives	PennDOT presented details regarding the NEVI Program and other available EV incentives to the Greater Valley Forge TMA.	Governmental entities; Representatives of the transportation and freight logistics industries
February 9, 2023	PennDOT Connects EV Presentation	EV Basics and Incentives	PennDOT and DEP jointly presented information about electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives. The presentation was tailored to local government audiences.	Governmental entities
March 15, 2023	Environmental Law Forum	General EV and NEVI	Provided an introduction to electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives as a session during the annual PA Environmental Law Forum conference.	Governmental entities; Private sector/industry representatives
March 20, 2023	AASHTO Committee on Construction Webinar	NEVI and EV Project Design	Participated in a webinar panel discussion for the NEVI Program, focused on EV charging program design and site selection/requirements.	Governmental entities



Date of Event	Event Name	Presentation Topic	Presentation Summary	Audience Type
March 23, 2023	FHWA Joint Office NEVI Program Webinar	NEVI Program Structure/Design	PennDOT and Colorado provided presentations on their EV programs and lessons learned from prior EV program management and development.	Governmental entities
April 13, 2023	Lehigh Valley Greenways Webinar	NEVI and other EV incentives	Provided an introduction to electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives as a session during a webinar for the Lehigh Valley Greenways.	Governmental entities; Private sector/industry representatives
April 13, 2023	Municipal Advisory Committee EV Update	EV Incentives for Municipalities	PennDOT presented a summary of state and federal funding incentives related to electric vehicles for the Municipal Advisory Committee.	Governmental entities
April 19, 2023	In Person Presentation Philadelphia	Greater Philadelphia Association of Energy Engineers (GPAEE), PECO	NEVI and CFI grant opportunities.	Private sector/industry representatives; Utilities
April 25, 2023	ITS America	PennDOT NEVI Program	PennDOT is providing an overview of how we approached NEVI Program. ITS America attracts a large audience of emerging transportation technology attendees.	Private sector/industry representatives; Governmental entities
April 24, 2023	Pennsylvania State Association of Township Supervisors Annual Conference	NEVI and other EV incentives	Provided an introduction to electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives at the PSATS annual conference. DEP also presented EV information and PennDOT provided an update on autonomous vehicles during the session.	Governmental entities
May 9, 2023	Innovation in Motion Webinar	NEVI and other PennDOT EV initiatives	PennDOT provided an overview of NEVI and other PennDOT EV initiatives for PennDOT employees during an Innovation in Motion webinar.	Governmental entities
May 27, 2023	PGHLWV EV Presentation	NEVI and other EV incentives	Provided an introduction to electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives at a webinar for the Pittsburgh League of Women Voters.	General public
June 5, 2023	Pennsylvania State Association of Boroughs Annual Conference	NEVI and other EV incentives	Provided an introduction to electric vehicles and charging, details regarding the PA NEVI Program, and a summary of other available EV incentives at the PSAB annual conference.	Governmental entities



Date of Event	Event Name	Presentation Topic	Presentation Summary	Audience Type
June 20, 2023	Electrification Coalition Medium and Heavy-Duty Bootcamp	NEVI	Presented an overview of PennDOT's NEVI Program during a panel session as the Electrification Coalition's MHD EV Bootcamp, held in Harrisburg.	Private sector/industry representatives; Governmental entities
July 10, 2023	NASTO Conference	NEVI Lessons Learned	Presented an overview of PennDOT's NEVI Program and lessons learned.	Governmental entities
July 13, 2023	AASHTO-NASEO EV Charging Infrastructure National Conference	NEVI Lessons Learned	Presented an overview of PennDOT's NEVI Program and lessons learned.	Governmental entities

### **List of PennDOT Participated Meetings and Discussions**

Date of Meeting	Meeting Topic	Other Organizations Included	Summary	Audience Type
January 5, 2023	EV Charging Infrastructure	University of Vienna Student	PennDOT was interviewed by a graduate student studying EV charging infrastructure deployment and EV government policy	General public
January 6, 2023	EV Adoption and Local Government EV Policy	Covestro	PennDOT met with Covestro research and development staff to discuss general trends in EV adoption and local government EV policy. Covestro hopes to prepare for increased EV adoption by researching and making the appropriate supply chain products.	Private sector/industry representatives
January 10, 2023	EV Charger Manufacturing and NEVI	Phoenix Contact	PennDOT staff performed a site visit at Phoenix Contact in Middletown to learn about their EV charging components manufacturing and share information about the NEVI Program.	Private sector/industry representatives
January 17, 2023	Rural Charging Incentives and Planning	North-Central RPO, Zook Motors	PennDOT discussed EV charging funding opportunities for rural areas and how to generally plan for charging needs in rural areas.	Governmental entities
January 26, 2023	EV Interagency Meeting	DEP, DGS, Education, DCNR, Turnpike, Agriculture, PUC, L&I	PennDOT led an EV interagency meeting that included NEVI updates, DEP program updates, and discussion regarding EV workforce and potential Commonwealthowned public EV charging pilot projects	Governmental entities



Date of Meeting	Meeting Topic	Other Organizations Included	Summary	Audience Type
February 2, 2023	EV/Broadband Discussion	DCED	PennDOT discussed EV charging station internet/connectivity needs and opportunities with DCED staff leading Bipartisan Infrastructure Law programs related to broadband.	Governmental entities
February 9, 2023	Atlas Public Policy EV Interview	Atlas Public Policy	PennDOT was interview by Atlas Public Policy regarding lessons learned from previous EV funding programs and the development of PennDOT's NEVI Program.	Private sector/industry representatives
February 13, 2023	EV Workforce Discussion	PA Community Colleges	PennDOT discussed EV workforce needs and opportunities with the PA Commission for Community Colleges. This served as a kickoff for continued collaboration and partnership.	Secondary education organizations
February 27, 2023	EV Workforce Discussion	Lackawanna College	PennDOT discussed EV workforce needs and opportunities with Lackawanna College, who is in the process of building a new facility that will include EV automotive training. This served as a kickoff for continued collaboration and partnership.	Secondary education organizations
February 27, 2023	EV Electrician Workforce Discussion	IBEW, NECA	PennDOT shared information regarding NEVI Program requirements and electrician EV workforce needs with electrical union representatives.	Labor organizations
March 23, 2023	EV Interagency Meeting	DEP, DGS, Education, DCNR, Turnpike, Agriculture, PUC, L&I	PennDOT led an EV interagency meeting that included NEVI updates, DEP program updates, and discussion regarding the recently opened federal CFI program. A Follow-up meeting on the CFI program was scheduled for the following week.	Governmental entities
February 27, 2023 March 29, 2023 May 23, 2023 July 5, 2023	NASTO EV Working Group	Northeast State DOT's	PennDOT presented an overview of the CFI program and lead discussion related to the program and how other states are approaching potential project development/support within their states.	Governmental entities
March 30, 2023	Planning Partners CFI Discussion	Pennsylvania MPOs/RPOs	PennDOT presented an overview of the CFI program and facilitated discussion regarding how planning agencies are approaching the program and how they can support project development/Submissions.	Governmental entities
May 12, 2023	Politico EV Interview	Politico	PennDOT was interviewed by Politico regarding our NEVI Program and other EV plans.	General public



Date of Meeting	Meeting Topic	Other Organizations Included	Summary	Audience Type
June 23, 2023	EnerSys Site Visit	EnerSys	Several PennDOT employees visited EnerSys headquarters in Reading, PA to learn about the company and their charging station solutions.	Private sector/industry representatives

### **List of NEVI and EV Leadership Activities**

Date of Meeting	Meeting Topic	Other Organizations Included	Summary	Audience Type
January, 2023	Comment on EPA EV Funding Programs	PA DEP, EPA	PennDOT worked with PA DEP to prepare responses to EPA requests for funding program comments.	Governmental entities
January 11, 2023	Radio Interview	WVIA	PennDOT was interviewed by WVIA regarding the NEVI Program and EV charging infrastructure.	General public
January 24, 2023	DEPA Coalition Meeting	PA DEP, general public	PennDOT co-lead a Drive Electric PA Coalition meeting with PA DEP. The meeting theme was "charging innovation". Member updates included NEVI Program updates from PennDOT.	General public; Governmental entities
January 26-29, 2023	Harrisburg Auto Show	PA DEP, DGS, general public	PennDOT coordinated and helped staff an EV public education booth at the Harrisburg Auto Show along with PA DEP and DGS.	General public
February 21, 2023	EV Battery Fire Response Discussion	DVRPC, planners, first responders, second responders	PennDOT participated in an EV battery fire response discussion hosted by DVRPC.	Private sector/industry representatives
February 24, 2023	EV Content for Local Government Connects Presentations	PSATS, planners	PennDOT provided EV and NEVI introduction slides and content to organizations of a presentation series for local governments across PA.	Governmental entities
March 3, 2023	CFI Program Tool Testing	FHWA	PennDOT tested and provided feedback on the draft emissions reduction estimation tool developed by FHWA for use when evaluating Submissions to the upcoming Charging and Fueling Infrastructure Discretionary Grant Program.	Governmental entities



Date of Meeting	Meeting Topic	Other Organizations Included	Summary	Audience Type
Spring, 2023	Graduate Student Study on Charging Experiences for Diverse and ADA individuals	Penn State University student	PennDOT is supporting a Penn State graduate student as they complete a research project related to diverse and ADA individuals' experiences at public charging stations. Lessons learned from the study can help inform best practices for station design.	General public
April 26, 2023	DEPA Coalition Meeting		PennDOT and DEP jointly hosted a quarterly Drive Electric PA Coalition meeting attended virtually by nearly 100 individuals. The meeting included updates from DEP and PennDOT on state EV programs, EV battery fire response information, an overview of the CFI program, and a summary of DEP's completed EV rate design study.	Governmental entities
April – May 2023	Mobile Charging Research	Mobile Charging Companies, PEMA	PennDOT researched and met with several mobile charging companies to assist PennDOT in developing a CFI Submission for mobile chargers. FHWA released guidance before the CFI due date that mobile charging is not allowable, so PennDOT then shifted efforts elsewhere.	Governmental entities
April – June 2023	CFI Submission Support	District 6, PECO, various others	PennDOT provided regular information and support for various government entities in Pennsylvania as they developed Submissions for the CFI program administered by the FHWA.	Governmental entities; Utilities
April – June 2023	Commonwealth CFI Submission	PEMA, DGS, DCNR, L&I	PennDOT organized and led the development of Pennsylvania's CFI Submission for charging stations at Commonwealth owned facilities.	Governmental entities
May-June 2023	DOE Concept Paper Submissions	PA Clean Cities, Electrification Coalition, Penn State University, Pennsylvania Commission for Community Colleges, Shippensburg University, L&I, PDE, IBEW, NECA, LIUNA	PennDOT submitted concept papers for two DOE grants: DE-FOA-0002893 Area of Interest (AOI) 13: Demonstration and Deployment – Electric Construction Vehicles & DE-FOA-0002881 Area of Interest 2B Workforce Development. The department reviewed and consulted on other organizations' submissions as well.	Governmental entities; Private sector/industry representatives; Labor organizations



Date of Meeting	Meeting Topic	Other Organizations Included	Summary	Audience Type
May 3, 2023	Pennsylvania Parking Association Annual Conference Roundtable	EV Discussion	PennDOT participated in the Executive Roundtable at the PA Parking Association Annual Conference. This included an update on the NEVI and CFI programs, and considerations for parking authorities thinking about charging stations.	Private sector/industry representatives
May 11, 2023	EV First Responder Training	GM, and local first responders	PennDOT participated in EV first responder training to learn the state of practice and opportunities for developing/expanding EV first responder training.	Private sector/industry representatives
May 16, 2023	In Person, Conference Presentation, Portland Oregon	The Forth, EV conference	State NEVI Lessons learned. Joint office is also on the panel.	Governmental entities; Private sector/industry representatives
June 2023	North Central EV Charging Study	North Central RPO, others	PennDOT is participating in the stakeholder group for the North Central RPO EV Charging Study.	Governmental entities
July 12, 2023	Charging Forward 2023- EV charging Symposium, Washington DC	USDOT, Joint Office, White House	Participated in all day meeting on technical assistance for NEVI Program	Governmental entities



### Appendix C. Stakeholder Engagement Survey – **Comment Summary**

A Stakeholder Engagement Survey was offered during PennDOT's engagement sessions via QR code at the event, hard-copy hand-outs, and email hyperlink for attendees to fill out about their experience and to provide recommendations for future outreach. The survey was open between October 13, 2022 and December 20, 2022.

A total of 79 attendees completed the survey. Of the 79 survey participants, 37 submitted comments to the open-ended survey questions. The open-ended questions and summary of responses are included below.

#### Survey Open-Ended Question Summary #1

Q: Please provide feedback on any additional information that you would have liked or feel you still need about the PA NEVI Plan, EV Charging or Utility coordination, if applicable.

Twenty-six (26) comments were received for this specific survey question. Below is a breakdown of the subject matter for the comments received:

- Seven (7) comments were praise-related on the approach taken.
- Five (5) comments were regarding utility coordination and providing a better understanding of electrical requirements, charging costs, variable rates, grid considerations, and utility location preferences if applicable.
- Four (4) comments recommended more focus on local government support, resources, and outreach to prepare for EV deployment and to apply for EV incentives/funding opportunities.
- Four (4) comments were regarding the inclusion of where to find resources on all the EV programs, including NEVI and how to get Submission/coordination support.
- Two (2) comments were regarding more information on the costs of EV charging, including installation and consumer costs.
- One (1) comment was for more information on workforce development.
- One (1) comment was for more information on how PennDOT will incorporate future proofing and consider medium- & heavy-duty charging.

#### Survey Open-Ended Question Summary #2

Q: Do you have any recommendations on how we could improve future engagement sessions about planning for electric vehicles?

Thirty (30) comments were received for this specific survey question. Below is a break-down of the subject matter for the comments received:

• Twelve (12) comments were praise-related to the approach taken.



- Nine (9) comments included recommendations on how to improve engagement sessions to include websites/hand-outs and maps, an agenda in advance, consider remote networking/matchmaking for those that cannot travel, include real-time polls for immediate feedback and discussions, live stream the presentation and include more time for networking.
- Five (5) comments recommended including auto dealerships or EV charging suppliers/station owners as presenters to discuss their approach.
- Three (3) comments recommended how to engage disadvantaged communities, high priority locations and communities, and recommended translating materials.

In the future it is recommended to include more open-ended questions on community deployment needs as these engagement sessions were targeted for businesses and stakeholders in the initial funding of the NEVI AFC build-out.



### Appendix D. NEVI Stakeholder Engagement Sessions Fall 2022 Final Report

The NEVI Stakeholder Engagement Sessions Fall 2022 Final Report can be found in full on the website on the About PA NEVI Plan webpage.





### Appendix E. Existing/Planned DCFC Stations in PA within 1 Mile of an AFC

This appendix includes all 106 current and planned DCFC sites that are within a mile of an AFC corridor based on AFDC and PA DEP data as of July 2023. This list includes all CCS sites as well as all Tesla supercharger sites.

#### **Existing and Planned NEVI Compliant DCFC Stations in Pennsylvania**

Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
900000	I-76 (28) I-79 (77)	1329 Freedom Rd Cranberry Township, PA 16066	4	Electrify America	Yes	Yes
Planned	I-76 (112) I-70 (112)	327 Industrial Park Rd Somerset, PA 15501	8	Applegreen Electric	Yes	Yes
167187	I-76 (146) I-70 (146) I-99 (1)	4354 Business 220 Bedford, PA 15522	4	Electrify America	Yes	Yes
121756	I-76 (226)	1098 Harrisburg Pike Carlisle, PA 17013	4	Electrify America	Yes	Yes
121758	I-76 (328)	160 N. Gulph Rd, Suite 2700 King of Prussia, PA 19406	6	Electrify America	Yes	Yes
205089	I-76 (347)	2129 Oregon Ave Philadelphia, PA 19145	4	Electrify America	Yes	Yes
228666	I-76 (347)	2300 W Oregon Ave Philadelphia, PA 19145	9	EVgo	Yes	Yes
167623	I-80 (62)	63 Perkins Rd Clarion, PA 16214	4	Electrify America	Yes	Yes
168152	I-80 (308)	355 Lincoln Ave East Stroudsburg, PA 18301	4	Electrify America	Yes	Yes
168487	I-90 (24)	1825 Downs Dr Erie, PA 16509	4	Electrify America	Yes	Yes
236945	I-95 (20)	1100 S Christopher Columbus Blvd Philadelphia, PA 19147	4	Electrify America	Yes	Yes
201038	I-99 (69)	101 Valley Vista Dr State College, PA 16803	4	Electrify America	Yes	Yes



Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
190383	I-276 (333)	500 W Germantown Pike Plymouth Meeting, PA 19642	4	Electrify America	Yes	Yes
Planned	I-476 (86)	256 Danner Rd Jim Thorpe, PA 18229	8	Applegreen Electric	Yes	Yes
188128	US-422 (337)	18 W Lightcap Rd Pottstown, PA 19464	4	Electrify America	Yes	Yes
121741	I-80 (101)	20 Industrial Dr DuBois, PA 15801	4	Electrify America	With Exception	Yes
202564	I-81 (185)	454 N 8th Ave Scranton, PA 18503	4	Electrify America	With Exception	No
193508	I-95 (35)	1455 Franklin Mills Cir Philadelphia, PA 19154	4	Electrify America	With Exception	No
Planned	I-70 (57)	205 N Center Ave New Stanton, PA 15672	4	Electrify America	With Power Upgrade	No
228682	I-76 (48)	2871 Freeport Rd Pittsburgh, PA 15238	6	EVgo	With Power Upgrade	No
Planned	I-76 (339) US-1 (52)	4000 Monument Rd Philadelphia, PA 19131	4	ChargePoint	With Power Upgrade	No
Planned	I-81 (77)	7970 Linglestown Rd Harrisburg, PA 17112	4	Electrify America	With Power Upgrade	No
201050	I-95 (20)	1600 S Christopher Columbus Blvd Philadelphia, PA 19148	5	Blink	With Power Upgrade	No
228691	I-95 (26)	3995 Aramingo Ave Philadelphia, PA 19137	6	EVgo	With Power Upgrade	No
257750	I-376 (77)	1775 S Braddock Ave Pittsburgh, PA 15218	4	EVgo	With Power Upgrade	No
240744	US-30 (304)	109 N Pottstown Pike Exton, PA 19341	4	EVgo	With Power Upgrade	No
256674	US-30 (309)	5 Matthews Rd Malvern, PA 19355	4	EVgo	With Power Upgrade	No
Planned	I-70 (6)	1133 US-40 Claysville, PA 15323	2	bp pulse	No	No
234555	I-70 (19) I-79 (19)	83 Murtland Ave Washington, PA 15301	1	ChargePoint	No	No



Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
95614	I-76 (49)	2000 Eastern Ave Verona, PA 15147	1	Blink	No	No
164196	I-76 (77) I-70 (77)	734 New Stanton Service Plaza Hunker, PA 15639	1	Blink	No	No
Planned	I-76 (91) I-70 (91)	3612 PA-31 Donegal, PA 15628	2	bp pulse	No	No
192958	I-76 (290)	1350 Reading Rd Denver, PA 17517	1	Blink	No	No
227146	I-76 (305)	1 Marsh Rd Elverson, PA 19520	1	Blink	No	No
Planned	I-78 (13)	8602 Lancaster Ave Bethel, PA 19507	2	ChargePoint	No	No
220704	I-79 (41)	2200 Tanger Blvd Washington, PA 15301	2	Volta	No	No
228059	I-79 (45)	105 Cavasina Dr Canonsburg, PA 15317	1	EVgo	No	No
Planned	I-80 (29)	5574 State Hwy 8 Harrisville, PA 16038	2	Blink	No	No
Planned	I-80 (42)	6406 Emlenton Clintonville Rd Emlenton, PA 16373	2	ChargePoint	No	No
Planned	I-81 (155)	7018 State Route 3007 Mountain Top, PA 18707	2	ChargePoint	No	No
Planned	I-81 (219)	2174 PA-848 New Milford, PA 18834	2	ChargePoint	No	No
174618	I-83 (21) US-30 (241)	1425 Eden Rd York, PA 17402	1	ChargePoint	No	No
Planned	I-84 (8)	1174 Mt Cobb Rd Lake Ariel, PA 18436	2	ChargePoint	No	No
228733	I-95 (23)	2401 Aramingo Ave # 2499 Philadelphia, PA 19125	2	EVgo	No	No
258239	I-95 (39)	3260 New Rodgers Rd Bristol, PA 19007	1	ChargePoint	No	No
261396	I-276 (343)	2595 Maryland Rd Willow Grove, PA 19090	1	ChargePoint	No	No



Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
171487	I-276 (351)	707 Neshaminy Mall Bensalem, PA 19020	1	Volta	No	No
302064	I-376 (9)	3510 Wilmington Rd New Castle, PA 16105	1	EV Connect	No	No
228391	I-476 (18)	200 W Ridge Pike Conshohocken, PA 19428	2	EVgo	No	No
146685	US-1 (30)	1241 Baltimore Pike Chadds Ford, PA 19317	1	ChargePoint	No	No
202814	US-15 (8)	1195 Baltimore Pike Gettysburg, PA 17325	1	Shell Recharge	No	No
201380	US-30 (315)	214 Lancaster Ave Devon, PA 19333	1	ChargePoint	No	No
192244	US-30 (324)	50 E Wynnewood Rd Wynnewood, PA 19096	2	EVgo	No	No
224735	US-422 (316)	815 Lancaster Ave Reading, PA 19607	1	ChargePoint	No	No
235624	US-422 (339)	84 Autopark Blvd Royersford, PA 19468	1	ChargePoint	No	No
165122	I-70 (19) I-79 (19)	331 Washington Rd Washington, PA 15301	8	Tesla	No	No
257662	I-70 (57)	119 Blair Blvd New Stanton, PA 15672	8	Tesla	No	No
102388	I-70 (147)	16417 Lincoln Hwy Breezewood, PA 15533	8	Tesla	No	No
222805	I-70 (147)	16520 Lincoln Hwy Breezewood, PA 15533	12	Tesla	No	No
102390	I-76 (28) I-79 (77)	1308 Freedom Rd Cranberry Township, PA 16066	6	Tesla	No	No
238572	I-76 (28) I-79 (77)	20111 US-19 Cranberry Township, PA 16066	12	Tesla	No	No
122312	I-76 (67)	7821 U.S. 30 North Huntingdon, PA 15642	8	Tesla	No	No



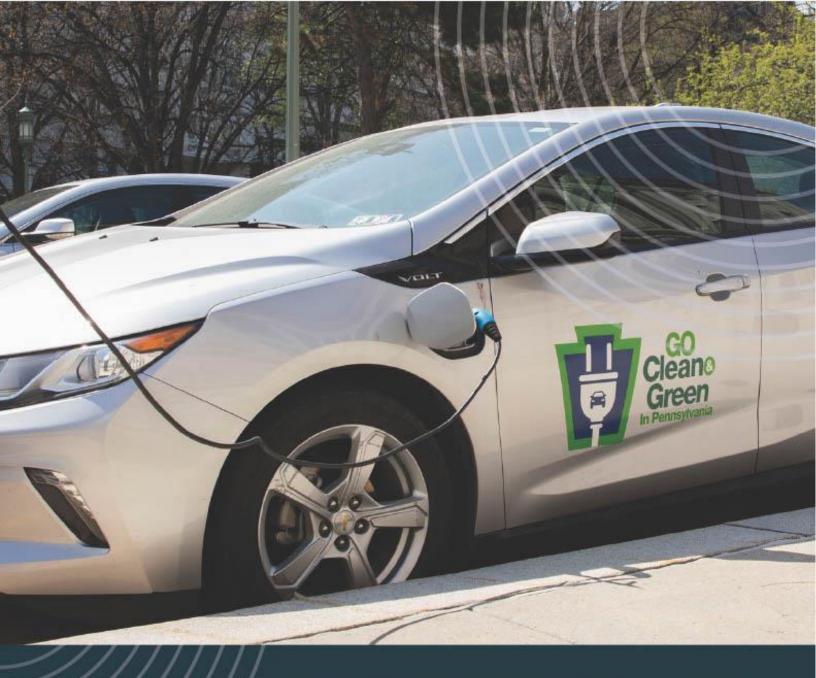
Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
261450	I-76 (67)	101 Ronda Ct North Huntingdon, PA 15642	8	Tesla	No	No
102398	I-76 (110) I-70 (110)	1030 North Center Ave Somerset, PA 15501	6	Tesla	No	No
194073	I-76 (112) I-70 (112)	327 Industrial Park Rd Somerset, PA 15501	16	Tesla	No	No
200539	I-76 (290)	1350 Reading Rd Bowmansville, PA 17507	8	Tesla	No	No
203261	I-76 (305)	5 Marsh Rd Elverson, PA 19520	8	Tesla	No	No
237635	I-76 (312)	1800 Ticonderoga Blvd Chester Springs, PA 19425	12	Tesla	No	No
117732	I-76 (344) US-30 (330)	420 North 20th St Philadelphia, PA 19130	10	Tesla	No	No
191514	I-76 (348)	2600 Penrose Ave Philadelphia, PA 19145	20	Tesla	No	No
205151	I-78 (29)	515 Lowland Rd Hamburg, PA 19526	8	Tesla	No	No
218073	I-78 (49)	7572 Schantz Rd Allentown, PA 18106	12	Tesla	No	No
122311	I-79 (73)	2615 Nicholson Rd Franklin Park, PA 15143	8	Tesla	No	No
153542	I-79 (113)	1931 Butler Pike Grove City, PA 16127	6	Tesla	No	No
102392	I-80 (97)	1867 Rich Hwy Falls Creek, PA 15840	8	Tesla	No	No
224154	I-80 (173)	5477 Nittany Valley Dr Mill Hall, PA 17751	12	Tesla	No	No
102387	I-80 (232)	11 Ricky Ave Bloomsburg, PA 17815	8	Tesla	No	No
102399	I-80 (299)	1000 Premium Outlets Dr	8	Tesla	No	No



Location Unique ID	Route (Exit/Mile Marker)	Location (Street Address)	Number of DCFC Ports	EV Network (If Known)	Meets 23 CFR 680?	Intent to Credit Towards Fully Built Out?
		Tannersville, PA 18372				
194589	I-80 (302)	65 PA-611 Bartonsville, PA 18321	8	Tesla	No	No
102389	I-81 (52)	1720 Harrisburg Pike Carlisle, PA 17015	8	Tesla	No	No
102397	I-81 (182)	1035 Shoppes Blvd Moosic, PA 18507	8	Tesla	No	No
116814	I-83 (14)	160 Leader Heights Rd York, PA 17403	8	Tesla	No	No
102394	I-83 (48)	3819 Union Deposit Rd Harrisburg, PA 17109	8	Tesla	No	No
102391	I-90 (24)	2225 Down Dr Erie, PA 16509	8	Tesla	No	No
206271	I-90 (27)	8180 Perry Hwy Erie, PA 16509	8	Tesla	No	No
186333	I-95 (26)	2501 Church St Philadelphia, PA 19124	8	Tesla	No	No
256571	I-95 (42)	5900 Bristol Pike Bristol, PA 19007	8	Tesla	No	No
237630	I-99 (15)	12604 Dunnings Hwy Claysburg, PA 16625	8	Tesla	No	No
117723	I-99 (33)	1915 Pleasant Valley Blvd Altoona, PA 16602	8	Tesla	No	No
186179	I-99 (71)	223 Colonnade Blvd State College, PA 16803	8	Tesla	No	No
102386	I-99 (83)	170 Buckaroo Ln Bellefonte, PA 16823	8	Tesla	No	No
157974	I-276 (351)	3620 Street Rd Bensalem, PA 19020	8	Tesla	No	No
262354	I-476 (18)	400 Alan Wood Rd Conshohocken, PA 19428	12	Tesla	No	No
190508	I-476 (86)	256 Danner Rd Jim Thorpe, PA 18229	8	Tesla	No	No
154207	I-180 (28)	105 Maynard St Williamsport, PA 17701	8	Tesla	No	No



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224561	I-295 (3)	639 East Lincoln Hwy Middletown Township, PA 19047	8	Tesla	No	No
296727	US-1 (22)	901 E Baltimore Pike Kennett Square, PA 19348	8	Tesla	No	No
170434	US-1 (32)	970 Baltimore Pike Glen Mills, PA 19342	8	Tesla	No	No
167577	US-15 (12) US-30 (213)	30 Camp Letterman Dr Gettysburg, PA 17325	8	Tesla	No	No
154656	US-30 (268)	518 Greenfield Rd Lancaster, PA 17601	8	Tesla	No	No
238209	US-30 (298)	5031 Horseshoe Pike Downingtown, PA 19335	8	Tesla	No	No
257001	US-30 (309)	5 Matthews Rd Malvern, PA 19355	8	Tesla	No	No
149343	US-30 (331)	34 South 11th St Philadelphia, PA 19107	6	Tesla	No	No
252510	US-422 (332)	260 West Schuylkill Rd Pottstown, PA 19465	12	Tesla	No	No
Planned	I-376 (84) I-76 (57)	317 Old Haymaker Rd Monroeville, PA 15146	2	TBD	No	No
Planned	I-79 (14)	269 E Roy Furman Hwy Waynesburg, PA 15370	2	TBD	No	No



# PENNSYLVANIA STATE PLAN FOR ELECTRIC VEHICLE INFRASTRUCTURE DEPLOYMENT



National Electric Vehicle Infrastructure (NEVI) Formula Program Email: ra-pdevcorridors@pa.gov

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