



**pennsylvania**  
DEPARTMENT OF TRANSPORTATION

# **PENNSYLVANIA NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI) PROGRAM**

## **GRANT INFORMATION WEBINAR**

NOVEMBER 01, 2022

# AGENDA

- Introduction
- PennDOT NEVI Grant Pre-announcement
- How to Get Ready
- Next Steps
- Q&A



# DISCLAIMER

All the information provided in this webinar is subject to change based on FHWA final NEVI Guideline and Rulemaking updates.

Final Notice of Funding Opportunity (NOFO) and Contractual Language will provide final guidelines.

\* NOFO may be advertised prior to final rulemaking. If so, Contractual Language will provide final guidelines.



# **PENNDOT NEVI GRANT PROGRAM - INTRODUCTION**

Natasha Fackler







# OVERVIEW OF NEVI FORMULA PROGRAM



- Funded through the 2021 Bipartisan Infrastructure Law (BIL)
- Provides PA \$171.5 million over next 5 years for electric vehicle (EV) infrastructure
  - Federal Fiscal Year 2022 - \$25.4 million
  - Federal Fiscal Years 2023-2026 - \$36.5 million annually
- All states must submit a NEVI State Plan before funds can be used. Must be updated annually.
  - PennDOT submitted state plan on July 21, 2022.
  - PennDOT NEVI plan approved on Sept 14, 2022.
- Pre-announcement of Funding Opportunity – Oct. 12, 2022
  - Informational Webinar for interested proposers – Nov. 1, 2022
- Proposal Announcement late December/early January



# PENNDOT NEVI STATE PLAN



## PENNSYLVANIA STATE PLAN FOR ELECTRIC VEHICLE INFRASTRUCTURE DEPLOYMENT

National Electric Vehicle Infrastructure (NEVI)  
Formula Program

VERSION FOR FFY 2022-2023

Approved by USDOT / On PennDOT's Website  
Search for "*PennDOT NEVI State Plan*"

## What's in the Plan?

- Vision and goals for the NEVI program
- Focus areas for NEVI program spending
- Needs, gaps and opportunities
- Key challenges and risks
- Contracting framework (more to come)
- Labor and workforce needs and actions
- Engagement and equity priorities





# EV ALTERNATIVE FUEL CORRIDORS (AFC)



- PennDOT has nominated corridors over 6 rounds - includes interstates and portions of US 30, US 15, Route 1, and Route 422 - over 1,800 miles of roadway
- NEVI funding must be applied to AFCs until a “**Build-Out**” certification by FHWA





# PENNDOT FUNDING ROUNDS

## Round 1

Primary/Auxiliary AFC Interstates

Dec 2022

*(Anticipated)*

## Round 2

Round 1 Unfilled Interstates/ Other  
AFC Routes

Mid 2023

*(Anticipated)*

## Round 3

2024

*(Anticipated)*

## Future Rounds

TBD

*(Anticipated)*

**FY 22 - \$25.4 million**

**FY 23 - \$36.5 million**

*(PennDOT NEVI funding)*

FY '22 & '23 - Approx. \$56 million

*(Anticipated available amount for applicants)*

**FY 24 - \$36.5 million**

**FY 25 - \$36.5 million**

**FY 26 - \$36.5 million**

*(PennDOT NEVI funding)*

FY '24, '25, '26 - Approx. \$100 million

*(Anticipated available amount for applicants)*

*\* Note: This is the total NEVI funding available by federal fiscal year. Some of this amount may be used for labor & workforce training, planning, outreach, and program management as allowed by NEVI guidelines. Remaining amount will be available for applicants.*



# FEDERAL ELIGIBLE COSTS

- **Program administration** costs.
- Costs for **pre-construction**
- **Construction** costs (as defined under 23 U.S.C. 101(a)(4)) directly related to EV charging station
- Costs for **planning, permitting, acquisition, and installation of on-site distributed energy resource equipment** (e.g., solar arrays, stationary batteries).
- Costs to **acquire and install on-site electric service equipment** (e.g., power meter, transformer, switch gear)
- Cost of **minor grid updates** (i.e. work necessary to connect a charging station to the electric grid distribution network).
- Costs to **repair, upgrade, and/or replace existing EV charging equipment to meet NEVI** minimum standards/requirements.
- Costs to **upgrade existing EV charging stations to meet ADA requirements.**
- Costs to **purchase proprietary adapters.**
- Cost to **install, operate, and maintain electric vehicle charging infrastructure (up to 5 years after the charging station is commissioned)**
  - Charging equipment lease fees (lease charging equipment rather than purchase).
  - Cellular network fees, internet service fees, or other similar fees.
  - Hardware and software maintenance and repair costs, including service agreements with third-party contractors and charging equipment manufacturers or warrantors.
  - Other operation costs that are necessary and directly related to the charging of vehicles.
- Cost to **install signage at site**
- Costs for **data sharing** about EV charging infrastructure to ensure the long-term success of investments.
  - This includes, to the extent practicable, costs related to the specific data sharing requirements of this program as well as costs of data sharing on all chargers and charging activities on the EV network.



# FEDERAL INELIGIBLE COSTS

1. Any costs incurred prior to grant award.
2. Any costs not directly related to an EV Charging Station.
3. Purchase or rental of real estate.
4. Construction or general maintenance of building and parking facilities (if not directly related to EV Charging Station).
5. Cost of major grid upgrades (longer line extension or upgrades, improvements to offsite power generation, bulk power transmission, or substations).

\* These are preliminarily identified eligible and ineligible costs. PennDOT is currently working with the Joint Office, FHWA, and its internal agency team to finalize the eligible and ineligible cost details. Final eligible and ineligible costs will be identified in the formal NOFO.





# PA ROUND 1 MATCH REQUIREMENTS

## Eligible Costs

Planning, Hardware, &  
Construction

Fixed O&M Costs

5-year fixed networking and data cost  
5-year fixed warranty cost

## Ineligible Costs

Variable O&M Costs

Electricity  
Insurance  
Other recurring business costs, i.e., staffing

**PennDOT**

Grant award - UP TO 80%  
of the eligible project costs.

**Applicant**

Grantee match - AT LEAST 20%  
of the eligible project costs.

Grant award WILL NOT cover or consider  
ineligible costs in grant formula.

*\*Amount of match is part of evaluation criteria. Match requirements are subject to change.*



# SELECTION CRITERIA

## SITE RELATED – Highest Priority

### Interchange Score (Location)

Ability to fill gaps	Number & type of nearby facilities	Proximity of facilities at interchanges with 24/7 access	Safe Access of Facilities	Route Significance	Equity: Environmental Justice areas, rural areas, air quality non-attainment areas
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### Site Readiness

Power availability	Amount of utility coordination completed	Amount of site development needed	Communication availability	Existing or need for site agreement /ownership	Existing or need for partnership agreement in place	Need for environmental clearance
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### Future Proofing

Power per port/site proposed	Number of additional ports/site proposed	Ability to provide more power per port in the future	Ability to add future ports	Availability of pull through sites	Ability to meet medium heavy duty charging requirements	Ability to meet heavy duty vehicle charging requirements
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# SELECTION CRITERIA

## SUSTAINABILITY; EQUITY; RESILIENCE; ECONOMIC DEVELOPMENT– Second Priority

### Criteria

Usage of renewable energy sources and strategies

Generation of clean energy

Renewable energy storage

Plan for involving local and small businesses/workforce

Plan for public/stakeholder engagement

Plan for team training and Safety

## COST- Third Priority

### Criteria

Amount of funding requested (out of total project cost)

\*Please note these selection criteria are subject to change. The final selection criteria will be identified in the NOFO.





# USDOT NEVI PROGRAM - NPRM

Released June 9, 2022 (aka “180 day Minimum Standards”)

Released by US DOT FHWA to govern the following aspects of NEVI:

- § 680.106 INSTALLATION, OPERATION, & MAINTENANCE
- § 680.108 INTEROPERABILITY OF EVSE)
- § 680.110 TRAFFIC CONTROL DEVICES & SIGNS
- § 680.112 DATA SUBMITTAL
- § 680.114 CHARGING NETWORK CONNECTIVITY OF EVSE
- § 680.116 PUBLIC INFO ON LOCATIONS, PRICING, ACCESSIBILITY

US DOT is reviewing comments and determining if revisions are needed to the Final NEVI Program Rules, which are still pending.

**Public comment on  
Proposed rules was  
open for 60 days.  
Closed on Aug '22.**

**383 Public comments  
received.**



# USDOT NEVI PROGRAM - NPRM

## Key Proposed Rules

- *Procurement Process Transparency*: Public disclosure on procurement process, # of bids, awardees, contract terms, project financial cost/award amounts, disclosure of fees for charging by EVSE.
- *State DOT Quarterly/Annual Data Submittal*: EVSE location; Session Start/End time; y/n completion/port; kWh/port/session; peak kW/port; uptime; O&M costs; any associated DER and specifications.
- *State DOT Annual Community Engagement Report*: Based on most recent FHWA approved state NEVI plan including community engagement type, date, number of attendees, communities represented by attendees, and how state DOT “reflected” information gathered by the engagement to inform the state DOT NEVI Plan.
- *Technician Certification*: All electricians installing, operating, maintaining NEVI funded EVSE must have EVITP or similar.
- *Use of Program Income*: “A reasonable return on investment of any private person financing the EV charging station project, as determined by the State DOT.”

## Key rules that apply to PennDOT Administration of the NEVI Program Funds



# USDOT NEVI PROGRAM - NPRM

## Key Proposed Rules

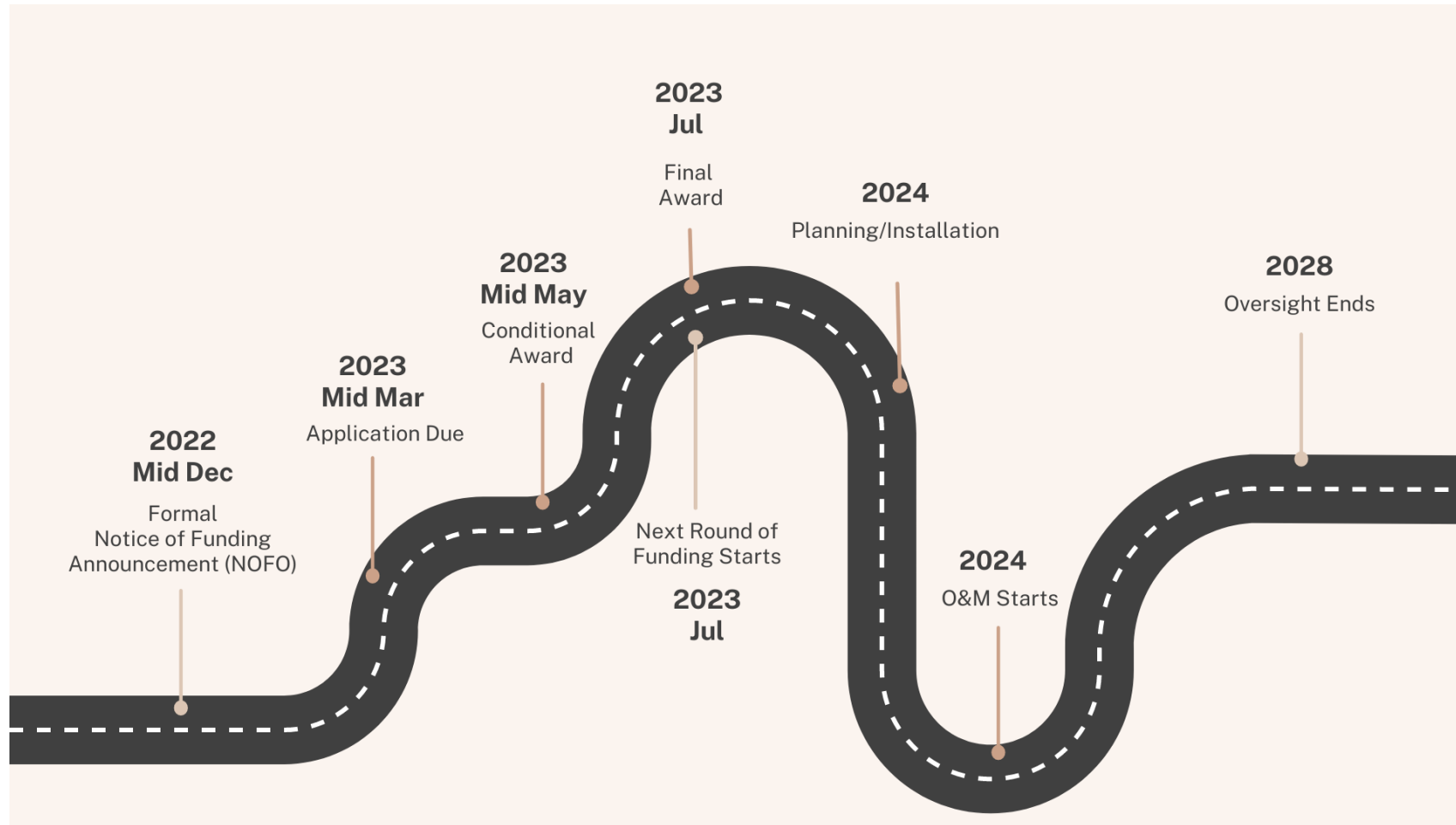
- *Available Access:* 24 hours, 7 Days a week.
- *Payment Methods:* Contactless payment method accepting all major debit/credit cards, and the ISO 15118 standard
- *Interoperability of EVSE:* EVSE must conform to ISO 15118 to communicate with CCS-compliant vehicles that have implemented ISO 15118.
- *EVSE Network Communication:* EVSE Secure communication with charging network via OCPP (see § 680.120 c.1)
- *Communication of Price:* "Chargers must display and base the price for electricity to charge in \$/kWh."
- *Minimum Uptime:* 97% minimum uptime calculated w/equation:  $\mu = ((8760 - (T_{\text{outage}} - T_{\text{excluded}})) / 8760) \times 100$
- *Third-Party Data Sharing:* Data fields must be available, free of charge, to 3rd-party software developers, via API

**Key rules that apply to the EVSE owner operators receiving NEVI program funds.**





# ANTICIPATED TIMELINE



\* 5 Year O&M starts once Installation is completed and approved for O&M.

\* These dates are representative and are subject to change based on applicants' feedback. NOFO will identify specific dates.



# **PENNDOT NEVI GRANT PROGRAM PRE-ANNOUNCEMENT**

Jamie Kopko

# ACCESSING PRE-ANNOUNCEMENT

<https://www.penndot.pa.gov/ProjectAndPrograms/Planning/EVs/Pages/default.aspx>

Pennsylvania Department of Transportation

Projects & Programs | Doing Business | Travel In PA | Regional Offices | Blog

Driver & Vehicle Services | 511PA Travel Info | Submit Concern | REAL ID | Projects | Results | Funding | Forms, Pubs & Maps

DOT > Projects & Programs > Planning > Electric Vehicles and Alternative Fuels

## Electric Vehicles and Alternative Fuels

Electric vehicles (EV) and other alternative fuels — including compressed natural gas (CNG), liquified natural gas (LNG), propane, and hydrogen — are playing an increasingly important role in Pennsylvania's transportation network. To meet public and industry expectations and ensure Pennsylvanians can get to their destinations safely and reliably using EVs and alternative fuels, PennDOT is planning for the new infrastructure needed to support this transition today — paving the way for the cleaner, more energy-efficient travel of the future.

PennDOT is actively collaborating with federal, state, and local partners to expand the Commonwealth's EV charging and alternative fuels network. Through the Federal Highway Administration's (FHWA) Alternative Fuels Corridor (AFC) program, the department is proactively planning for the build-out of fast-charging EV and alternative fuel stations, particularly along highways, to support the needs of drivers for reliable long-range and employment-related travel. PennDOT also works closely with the [Pennsylvania Department of Environmental Protection](#) (PA DEP), which leads a number of EV and alternative fuels initiatives and funding programs.

More information on EVs, the status of Pennsylvania's EV charging network, the AFC program, and other departmental efforts regarding alternative fuels may be found below.

- Alternative Fuel Corridors
- National Electric Vehicle Infrastructure (NEVI) Formula Program**
- The Drive Electric PA Coalition
- EV Mobility Plan
- EV Resources



# **PENNDOT NEVI GRANT PROGRAM LOCATION MAP**

Jonathan Riehl

# ROUND 1 PRIORITY PROJECT LOCATIONS



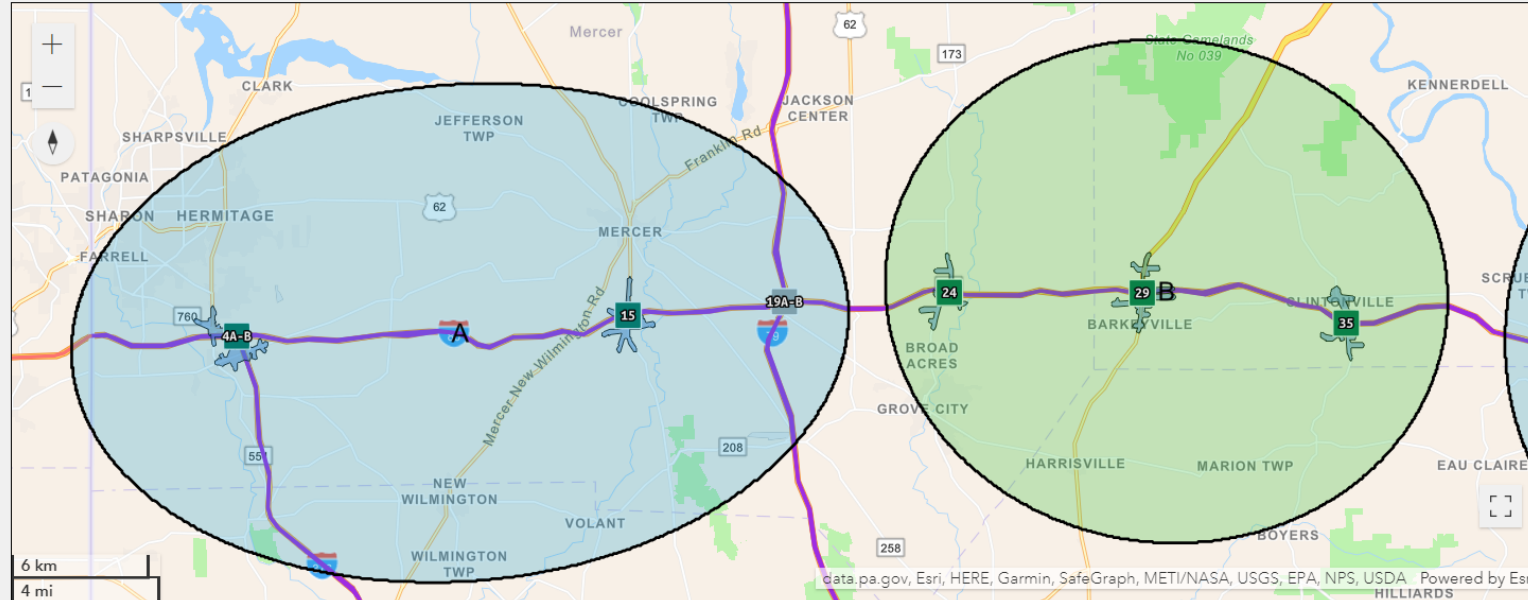
## Pennsylvania NEVI - Anticipated Funding Round 1 - Interchange Information

### Instructions

- Click on the expander arrow to show all Funding Round 1 Highways. By default, I-80 is shown on the map.
- Use the eye icon to show or hide the highway you are interested in on the map.
- You can turn on/off subcomponents by using the expanding arrow and eye icon for each highway if desired.
- As you zoom in, different layers and labels will appear, so if you do not see something you're looking for, try zooming in or out on the map.
- AFC lines are shown by default and compliant NEVI chargers are hidden. Use the eye icon to toggle these layers as desired.

### Round 1 Highways

- I-70
- I-76
- I-78
- I-79
- I-80
- Groups
- Interchanges
- Polygons



### Interchange Groups

- A Priority I – High
- A Priority II – Mid
- A Priority III – Low

### NEVI Compliant Charging Sites

- Operating (PA)
- Planned (PA)
- Operating (Out of State)

### Interchanges

- 234 Eligible
- 234 Ineligible

### AFCs

- PA Round 1 Corridor
- PA Round 2 Corridor
- Bordering Corridor

### 1mi Polygons



[View PA NEVI Info](#)

[Submit a Question](#)

[Download GIS Data](#)

Information on interchange groups, priorities, and scoring

Updated 10/31/22

Items on map may be updated by PennDOT, including interchange groups and priorities.





# **PENNDOT NEVI GRANT PROGRAM - HOW TO GET READY TO APPLY**

Andrew Conley

# HOW TO GET READY



Register for Keystone Login



Get Familiar with NEVI Program



Attend Informational Webinar



Put a Team Together



Select Site & Assess Readiness



Coordinate with Utilities



# REGISTER FOR KEYSTONE LOGIN

Register for Keystone Login using the link below:

<https://www.esa.dced.state.pa.us/login.aspx>

You will need the following information:

Personal information: First name, last name, date of birth

Contact information: Email, Mobile phone number

Login information: Your preferred username/password

3 Security Questions/Answers

**\* Note:** You will need the keystone Login to submit grant application

## Login

### What's New?

For an overview of the changes in the new Single Application, please read [Help](#).

Username

Password

LOGIN



Powered by

**KEYSTONE LOGIN**

[Register](#)

[Forgot Password](#)

[Forgot Username](#)

[Learn more about Keystone Login](#)

[Having Trouble Registering](#)



# GET FAMILIAR WITH NEVI PROGRAM

- ❑ Learn about the NEVI Program.

- ❑ Resources for

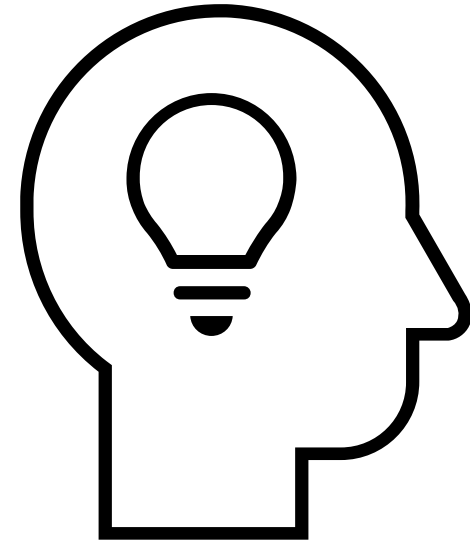
- ❑ PA NEVI Plan

- ❑ Federal NEVI guidance

- ❑ Federal NEVI FAQ

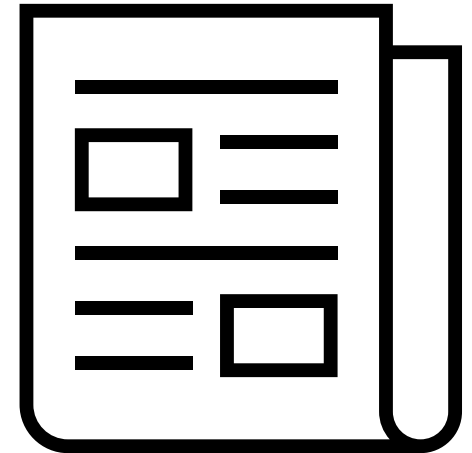
- ❑ NEVI proposed rulemaking

- <https://www.penndot.pa.gov/ProjectAndPrograms/Planning/EVs/Pages/Learn-NEVI.aspx>



# ATTEND THE INFORMATION WEBINAR

- This webinar is recorded for your convenience.
- Register and attend one of the upcoming stakeholder sessions (Nov 3, Nov 10, Nov 15, Nov 22)
  - Register using the link below  
<https://www.penndot.pa.gov/ProjectAndPrograms/Planning/EVs/Pages/Learn-NEVI.aspx>
- Refer to the FAQ section for commonly asked questions/responses
- Email the team at ([ra-pdevcorridors@pa.gov](mailto:ra-pdevcorridors@pa.gov)) if you have any additional questions.

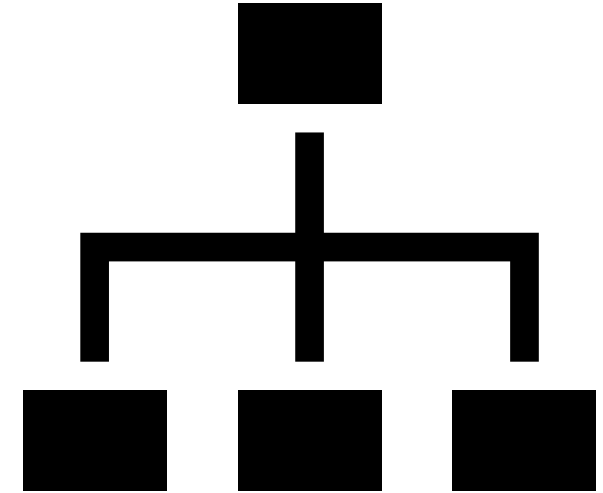




# PUT A TEAM TOGETHER

Successful planning, deployment, and O&M of EV site would likely require at least:

- Site Planner
- Construction contractor (Civil, Electrical, etc.)
  - Refer to NEVI guidelines for certification/training requirements
- Equipment Supplier
- Operators; Maintainers
- Others



\* **Note:** Some team members may play different roles

\*\* **Note:** Applicant will need to identify the team members as part of the application.



# CLEAN CITIES COALITIONS

**Mission:** To reduce petroleum consumption within the transportation sector using alternatives to gasoline and diesel.



**TONY BANDIERO, EP-ACT**

Email: [tbandiero@ep-act.org](mailto:tbandiero@ep-act.org)

Website: <https://ep-act.org/>



**RICHARD PRICE, PRCC**

Email: [rprice5705@aol.com](mailto:rprice5705@aol.com)

Website: <http://pgh-cleancities.org/>

Part of the Department of Energy's Clean Cities Program since 1995

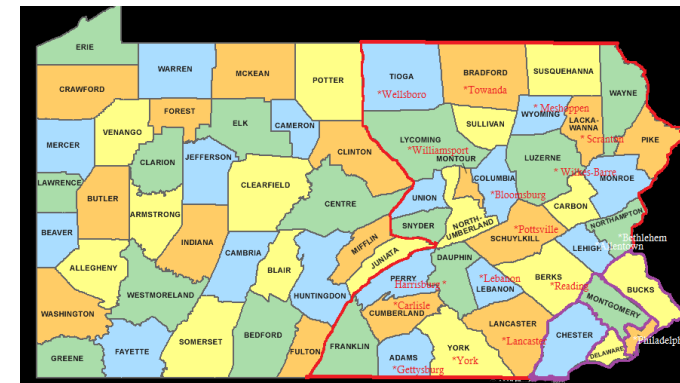
Comprised of Public and Private companies, State and Local Governments, Municipalities and Utilities

Assist with Grants/incentives/vouchers/rebates

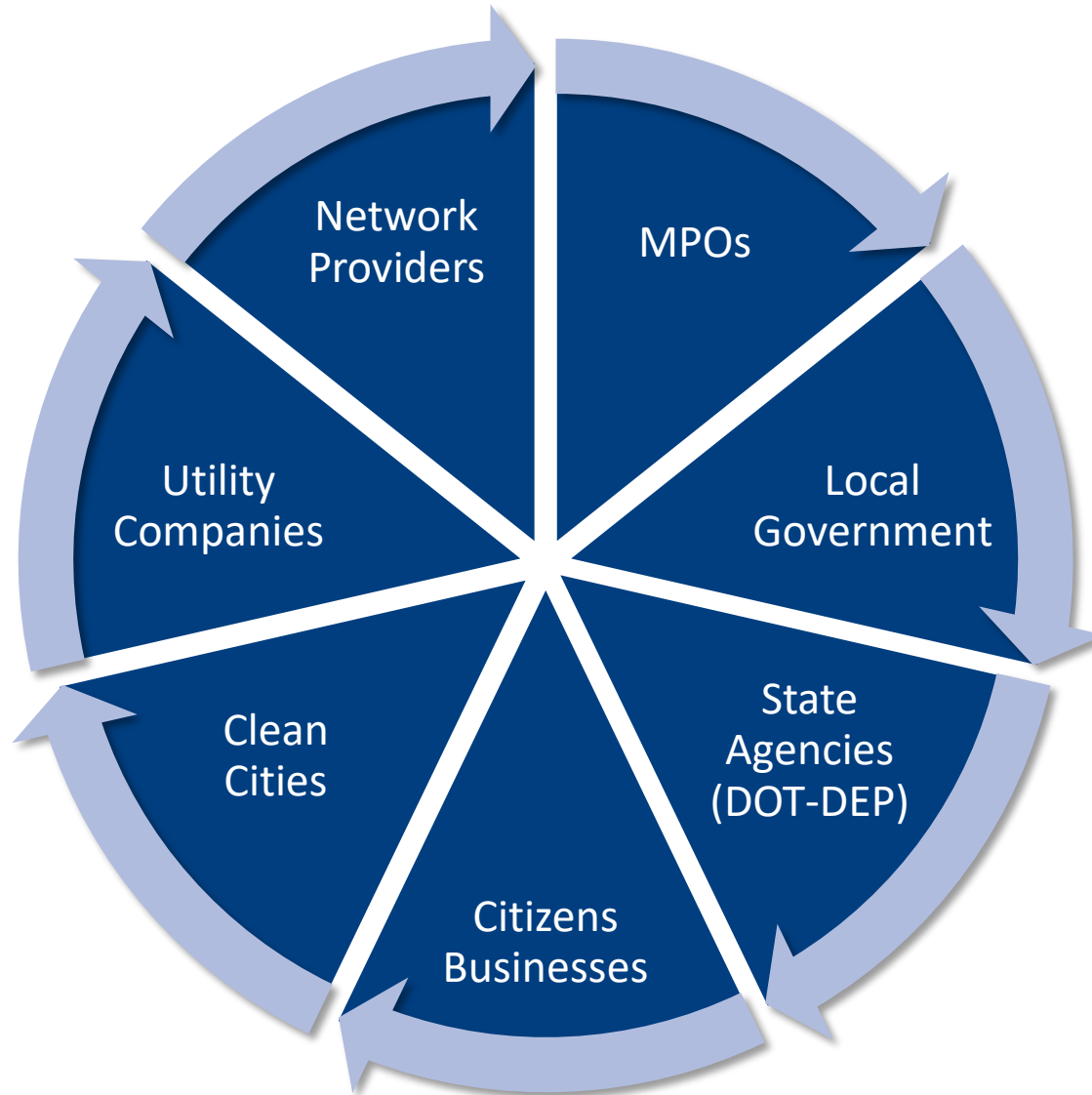
Technical Assistance

Project Management

Education and Outreach



# IMPORTANCE OF COORDINATION

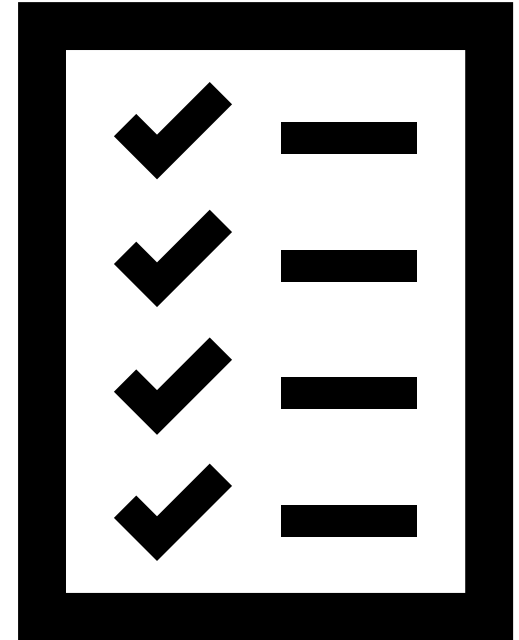


# SELECT SITE AND ASSESS SITE

- ❑ Select an appropriate site for the charge stations. Ensure site meets NEVI requirements (ADA access, safety etc.,)
- ❑ Conduct site assessment. Use site/time readiness scoring criteria as a reference.
- ❑ Environmental Clearance. Conduct preliminary assessment for environmental clearance needs.

\* **Note:** Applicant will need to provide site location information and site readiness information as part of the application

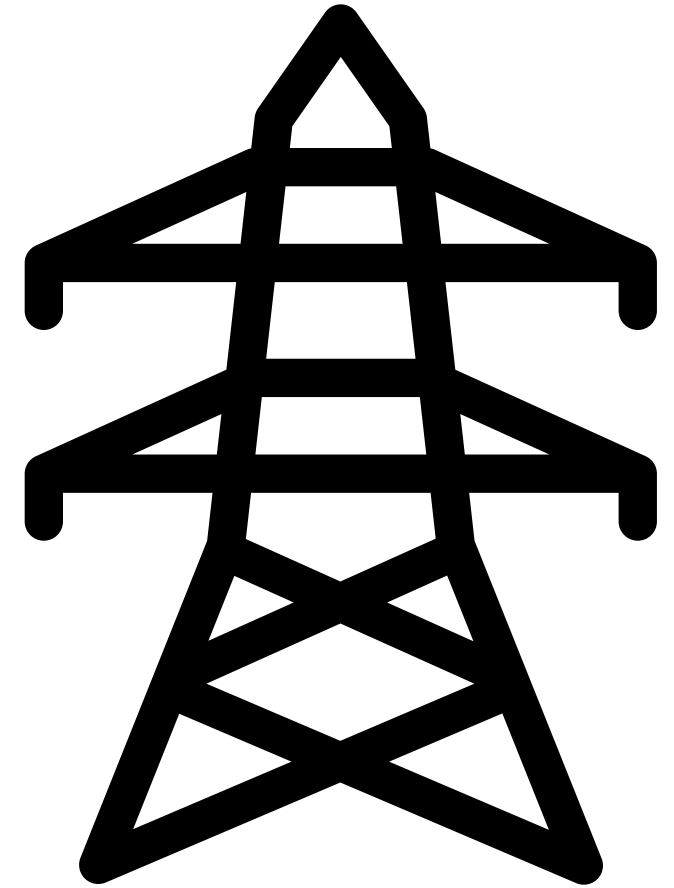
\*\* **Note:** After the final selection process, PennDOT will work with the applicant and appropriate agencies to get environmental clearance.



# COORDINATE WITH UTILITIES

- Identify the utility servicing the site
  - Reach out to [ra-pdevcorridors@pa.gov](mailto:ra-pdevcorridors@pa.gov) if you have questions on the utilities servicing the site.
- Coordinate with the utilities
  - Identify the feasibility of providing (NEVI) required power at the site
  - Discuss cost and schedule implications

\* **Note:** Applicant will need to provide the utility contact information and cost/timeline for utility related items as part of the application





# COORDINATE WITH UTILITIES



NEVI Utility Site Assessment Request Form

DRAFT V.1

## SITE APPLICANT INFORMATION (Site applicant to complete.)

Name of Company/Customer: \_\_\_\_\_

Facility Owner's Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Contact Phone: \_\_\_\_\_ Contact Email: \_\_\_\_\_

## SITE INFORMATION – ELECTRICAL DISTRIBUTION SERVICE NEEDS (Site applicant to complete.)

Address of Site: \_\_\_\_\_

Latitude/Longitude: \_\_\_\_\_

Number of chargers anticipated: \_\_\_\_\_ Power level of each charger (kW): \_\_\_\_\_

Type of Service:  New Service (No existing lines)  Existing Service Lines  Upgrade of Existing Service

Provide aerial view of site with transformer location and termination point. Show nearest 3-phase source (if known):

[Insert aerial view here with proposed location of chargers]



NEVI Utility Site Assessment Request Form

DRAFT V.1

Type:  Primary Service  Secondary Service

Proposed In-Service Date: \_\_\_\_\_

Number and size of conductors anticipated: \_\_\_\_\_

Requested voltages (i.e., 3-phase 277/480V 4 wire): \_\_\_\_\_

Service Capacity (amps): \_\_\_\_\_ Load Requested (kVA): \_\_\_\_\_

## COST ESTIMATE (Utility Company to complete.)

DESCRIPTION	TOTAL COST & TIMELINE
<b>High-level Engineering &amp; Construction Cost &amp; Time Estimate</b> (This high-level cost and time estimate includes Power Transformer, terminator pole, if applicable, Service Lateral or conductor and Metering.)	\$ Timeline:
<b>Additional Engineering &amp; Construction Costs/Time Estimates</b> (These estimates include additional time and costs for primary line extension to customers' location and upgrades required to accommodate new load.)	\$ Timeline:
Site Applicant construction responsibilities for electric distribution service	\$
EDC construction responsibilities for electric distribution service	-\$
<b>Total Estimated Timeline for Customer:</b>	
<b>Total Estimated Cost to Customer:</b>	\$

Additional notes:



**\* Final version of this form will be part of NOFO.**



# UTILITY INFORMATION

- Information will be available from the below utility partners on initial site assessment collaboration:
  - Duquesne Light
  - FirstEnergy
  - PPL Electric Utilities
  - PECO
  - PA Municipal Electric Association
  - Central Electric Cooperative
  - Citizens' Electric Company

Check our website [www.penndot.pa.gov/ev](http://www.penndot.pa.gov/ev), NEVI > How to Get Ready.

More information will be added in the future.

**NOTE: NEXT SLIDES ON UTILITIES ADDED POST WEBINAR AS RESOURCE**



# DUQUESNE LIGHT & EV CHARGING

## What we do

Aligned with DLC's mission to create a clean energy future for all, we empower all our customers to experience the benefits of electric mobility.

## How we do it

We serve as a trusted partner, offering innovative products and services that optimize the use of our grid to advance the EV market.

## Let's work together

Contact [ElectricVehicles@duqlight.com](mailto:ElectricVehicles@duqlight.com) to:

- Submit an electric service request so we can assess the time and cost it will take to power your charging station project.
- Learn about DLC's Community Charging Program which offers incentives and assistance for commercial charging station installation.



## DLC service territory NEVI Corridors



Learn more at [duquesnelight.com/communitycharging](https://duquesnelight.com/communitycharging)



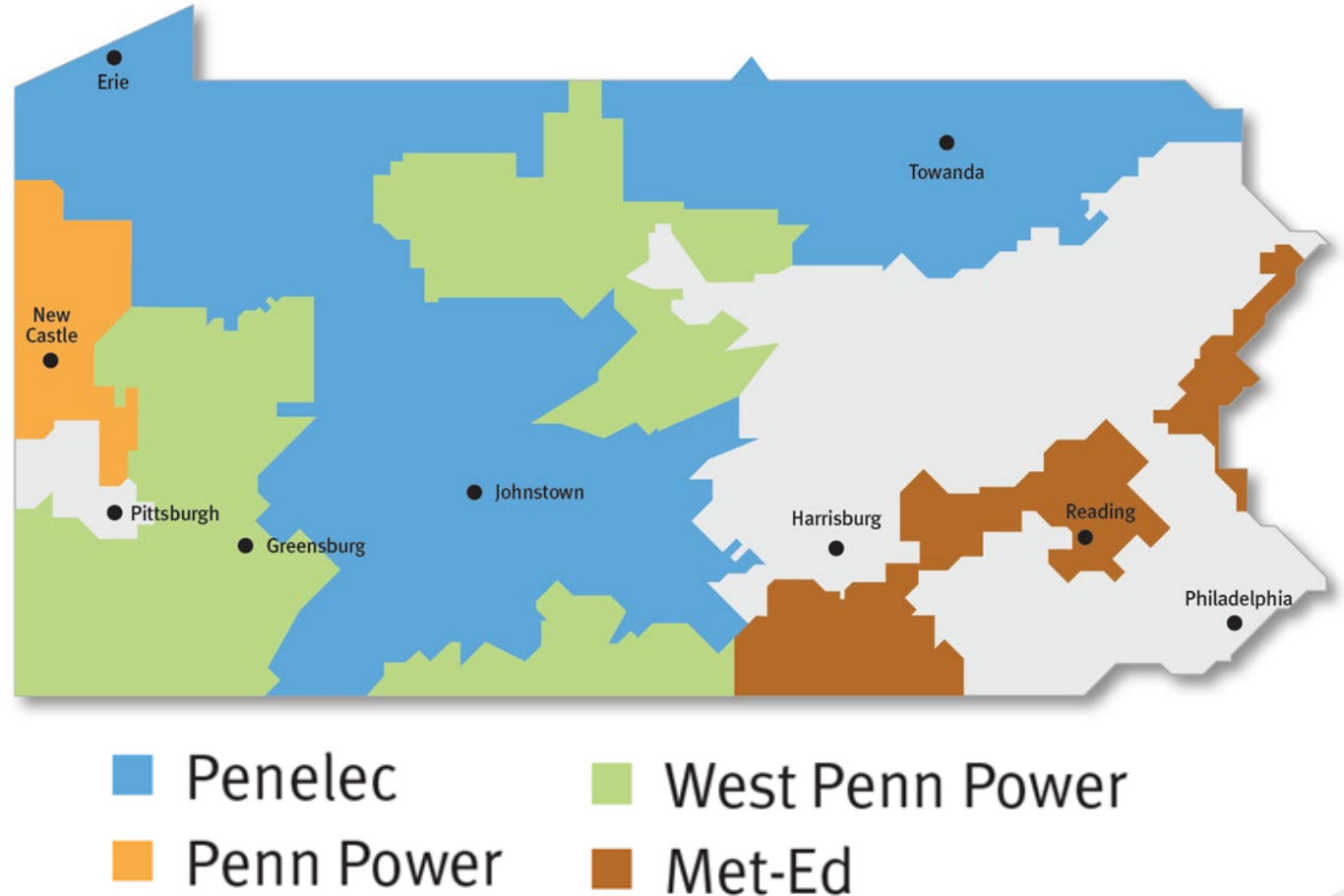
# FIRSTENERGY - HIGHLIGHTS

FirstEnergy®

Focused on Our Future

## PENNSYLVANIA HIGHLIGHTS

- Our four operating companies serve more than **2.1** million customers within **32,400** square miles of Pennsylvania
- Approximately **3,700** employees in Pennsylvania
- Nearly **95,000** miles of transmission and distribution lines



# FIRSTENERGY - UTILITY PRE-SCREEN REQUEST PROCESS

**FirstEnergy**<sup>®</sup>

Focused on Our Future

## What the Customer Provides:

- Completed FirstEnergy – PA NEVI Applicant Information form.
- Completed FirstEnergy – PA NEVI Load Sheet

## What FirstEnergy PA Utilities provide:

- High-level impact study of the Distribution Circuit for the requested Charging Station.
- Estimated cost of the project.
- A direct FE PA NEVI Application email address to communicate between the customers and the utility throughout the process.



FirstEnergy Pennsylvania NEVI – [PA.NEVI@firstenergycorp.com](mailto:PA.NEVI@firstenergycorp.com)





# PECO – AN EXELON COMPANY

## Fleet Electrification Roadmap

### • Initiation

- Research your charging and electrification needs
- Verify or establish your PECO account or meter number
- Work with your manufacturer or electrical contractor to prepare and submit a utility service application, site plan and equipment specifications

### • Planning

- PECO reviews service application and advises if utility infrastructure upgrades are needed
- Design Construction Consultant performs site visit and initial design of the utility equipment or upgrades needed
- Project timeline developed

### • Design

- PECO completes detailed design for electrical installation
- Simultaneous applications for permit approvals (PECO – utility permits and underground markings; customer contractor works with local municipality)
- Customer completes installation of charging equipment and “behind the meter” infrastructure

### • Scheduling and Construction for Utility Upgrades

Start Your Electrification Journey at [www.peco.com/evroadmap](http://www.peco.com/evroadmap)



# PECO - TYPICAL POWER REQUIREMENT TIMELINES

Power (MWs)	Equipment	Description	Timeline
125 kW	Switching/cap bank	Minimal on/off property work is needed to accommodate the capacity requirement	2-4 months
500 kW	Install new transformer or extend feeder	Minor on/off property work is needed to accommodate the capacity request	3-6 months
2 MW	New medium voltage feeder	New feeder extension is required to accommodate additional capacity	9-12 months
6 MW	Two new feeders (medium or high voltage)	Construct or extend multiple feeders to customer site	12-15 months
12.5 MW	Multiple new feeders (medium or high voltage)	Depending on load, may build or extend feeders to customer site	12-18 months
25 MW	Multiple new high voltage feeders	Load will likely warrant multiple high voltage feeders and potential substation work	24+ months

Please contact your PECO Large Customer Service representative that is noted on your invoice, or email our Green Power Connect Team [GPCTeam@peco.com](mailto:GPCTeam@peco.com) for more information if your organization doesn't have an LCS manager



**Early engagement with PECO is critical to fleet electrification success!**



# PECO – AN EXELON COMPANY

## Navigating the Roadmap

Vehicle electrification benefits

Start your journey with Exelon

Electric vehicle charging overview

Electric Vehicle Supply Equipment

Charging at your business

Let's get started

Fleet electrification roadmap

→ **Route for success**

Transition to electricity

Determine your business charging needs

Choose the right infrastructure

Charging window examples

Typical power requirement timelines

On-going maintenance and support

Path to Clean

Energy glossary

### Route for success



\*Consult with your fleet manufacturer or electrical contractor to prepare and submit a complete service application

Start Your Electrification Journey at [www.peco.com/evroadmap](http://www.peco.com/evroadmap)



# PECO – SERVICE & METER APPLICATION FOR EVS

- Electrical Contractor submits a Service and Meter application to PECO. Attach a site plan and Equipment Specification Sheet.
- PECO has a dedicated group of Design Construction Consultants that will work with your contractor to complete the service upgrade.
- Large Customer accounts are assigned an Account Manager who will be your point of contact throughout the process.

**Start Your Electrification Journey at [www.peco.com/evroadmap](http://www.peco.com/evroadmap)**



# PECO - APPLICATION

 An Exelon Company	<b>PECO</b> <b>Application for Electric Service &amp; Meter</b>	M-24175 (front) Rev. 07/16
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**INSTRUCTIONS:**

Please complete this request and return to the PECO Regional Office (*listed below*) in the area service is required. Incomplete information may result in a delay in processing.

All work must comply with [PECO Electric Service Requirements manual](#) and be inspected by an [approved inspection agency](#). (City of Philadelphia requests may be shared with Licenses & Inspections). Not all service voltages are available in all areas. **Before purchasing electrical equipment or proceeding with any wiring, information regarding service availability and meter location should be obtained from the company.**

A credit application and agreement must be completed **if the customer has not had PECO service within the last 60 days**. The company reserves the right to **cancel** this request if no further communication is received from the customer **within 90 days** of PECO's response date.

NOTE: To initiate a 'make-safe' request (de-energize / cover lines) please complete [this online request](#). If demolishing a building and need PECO to remove electric or gas facilities, [call 8-1-1 \(PA One Call\) Demolition Requests](#)

**NEW BUSINESS SERVICES (1-800-454-4100)**

**PHILADELPHIA COUNTY**  
 830 S. Schuylkill Ave.  
 Philadelphia, PA 19146  
 Fax # (215) 731-2327  
 Email: PHL.County

**DELAWARE, CHESTER & YORK COUNTIES**  
 1050 W. Swedesford Rd.  
 Berwyn, PA 19312  
 Fax # (610) 725-1416  
 Email: DelChester

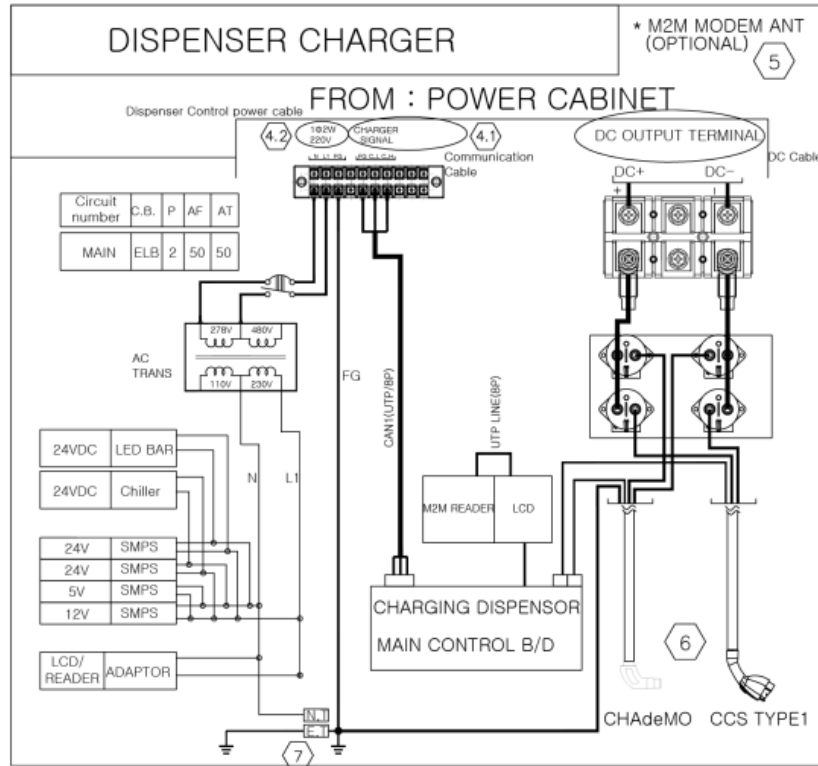
**BUCKS & MONTGOMERY COUNTIES**  
 400 Park Ave.  
 Warminster, PA 18974  
 Fax # (215) 956-3240  
 Email: BucksMont

**NEW RESIDENTIAL CONSTRUCTION (All Counties)**  
 400 Park Ave.  
 Warminster, PA 18974  
 Fax # (215) 956-3386  
 Email: NRCG

CUSTOMER NAME		Tax ID # or SSN		<b>TYPE OF REQUEST</b>																																	
** ADDRESS TO BE SERVED		APARTMENT / LOT #		<input type="checkbox"/> New Service <input type="checkbox"/> Load Increase / Decrease <input type="checkbox"/> Reintroduction of Service <input type="checkbox"/> Temporary Service <input type="checkbox"/> Upgrade / Changes <input type="checkbox"/> Remove Service <input type="checkbox"/> Separation of Wiring <input type="checkbox"/> Service Relocation <input type="checkbox"/> Demo (PA 1 Call Notified)																																	
CITY, STATE		ZIP CODE		<b>TYPE OF SERVICE: Please include site plan.</b>																																	
*UTILITY POLE #		*SUBDIVISION / DEVELOPMENT		<input type="checkbox"/> RESIDENTIAL <input type="checkbox"/> Single House <input type="checkbox"/> Mobile Home <input type="checkbox"/> Store <input type="checkbox"/> Office <input type="checkbox"/> Duplex <input type="checkbox"/> Modular Home <input type="checkbox"/> Industrial <input type="checkbox"/> Warehouse <input type="checkbox"/> Town House <input type="checkbox"/> Restaurant <input type="checkbox"/> Other <input type="checkbox"/> Electric Vehicle Charging Station		<input type="checkbox"/> COMMERCIAL																															
* If Applicable ** Please use this address when applying for underwriter's inspection		CITY, STATE		Area of Building		Sq. Ft.																															
CUSTOMER'S BILLING ADDRESS		PECO ENERGY ACCOUNT #		<b>SERVICE CHARACTERISTICS:</b>																																	
-OR- CITY, STATE		ZIP CODE		<input type="checkbox"/> Underground <input type="checkbox"/> Aerial		<table border="1"> <thead> <tr> <th>PHASE</th> <th>VOLTS</th> <th>WIRES</th> <th>AMPS</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>240</td> <td>3</td> <td></td> </tr> <tr> <td>3</td> <td>120/240</td> <td>4</td> <td></td> </tr> <tr> <td>3</td> <td>120/208</td> <td>4</td> <td></td> </tr> <tr> <td>3</td> <td>277/480</td> <td>4</td> <td></td> </tr> <tr> <td>3</td> <td>13200</td> <td>3 or 4</td> <td></td> </tr> <tr> <td>3</td> <td>33000</td> <td>3 or 4</td> <td></td> </tr> </tbody> </table>		PHASE	VOLTS	WIRES	AMPS	3	240	3		3	120/240	4		3	120/208	4		3	277/480	4		3	13200	3 or 4		3	33000	3 or 4			
PHASE	VOLTS	WIRES	AMPS																																		
3	240	3																																			
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3	13200	3 or 4																																			
3	33000	3 or 4																																			
SEND REPLY TO: ELECTRICIAN'S OR BUILDER'S NAME		CITY, STATE		<b>METER INFO:</b> <input type="checkbox"/> Single Meter Required <input type="checkbox"/> Multiple Meters Total No. _____																																	
ADDRESS		Reply Requested by:		<b>Location:</b> <input type="checkbox"/> Outside <input type="checkbox"/> Inside																																	
CITY, STATE		ZIP CODE		<b>HEATING / AIR CONDITIONING:</b>																																	
TELE. #		E-mail Address		<input type="checkbox"/> Heat Pump _____ Tons <input type="checkbox"/> Resistance <input type="checkbox"/> Natural Gas <input type="checkbox"/> Other _____ <input type="checkbox"/> Central Air _____ Tons <input type="checkbox"/> Propane <input type="checkbox"/> Type Backup _____																																	
<b>CURRENT CONSTRUCTION STATUS:</b>		<b>Approximate Date Service Requested:</b>		<b>CHARACTERISTICS OF NEW OR ADDITIONAL LOAD (REQUIRED: COMMERCIAL SERV.):</b>																																	
<input type="checkbox"/> Not Started - Date Customer Will Start Work: _____ <input type="checkbox"/> In Progress <input type="checkbox"/> Completed				<table border="1"> <thead> <tr> <th rowspan="2">TYPE</th> <th rowspan="2">CONNECTED LOAD (KW)</th> <th colspan="2">PECO ENERGY USE ONLY (DEMAND)</th> </tr> <tr> <th>SUMMER (KW)</th> <th>WINTER (KW)</th> </tr> </thead> <tbody> <tr> <td>LIGHTING</td> <td></td> <td></td> <td></td> </tr> <tr> <td>HEATING</td> <td></td> <td></td> <td></td> </tr> <tr> <td>AIR/COND.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TANKLESS WATER HTR</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MISC.</td> <td>150</td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td>150</td> <td></td> <td></td> </tr> </tbody> </table>				TYPE	CONNECTED LOAD (KW)	PECO ENERGY USE ONLY (DEMAND)		SUMMER (KW)	WINTER (KW)	LIGHTING				HEATING				AIR/COND.				TANKLESS WATER HTR				MISC.	150			TOTAL	150		
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<b>CUSTOMER COMMENTS / DESCRIPTION OF WORK:</b>				<b>LARGEST MOTOR SPECIFICATIONS</b>																																	
Installing (10) level 2 EV charging station at 15 kW each. See attached site plan and equipment specification sheet.				QUANTITY _____ SIZE (HP) _____ LOCKED ROTOR CURRENT _____ MOTOR CODE LETTER _____ PHASE _____ VOLTAGE _____ FREQ. OF STARTING (per hr.) _____ PURPOSE _____																																	
SUBMITTED BY: _____		DATE: _____		<b>GENERAL LOAD</b>																																	
Enclosures: <input type="checkbox"/> Site Plans <input type="checkbox"/> Single Line Diagram <input type="checkbox"/> Substation Arrangement				<table border="1"> <tr> <td style="width: 100px; height: 20px;"></td> <td style="text-align: right;">KW</td> </tr> </table>					KW																												
	KW																																				



Dispenser - 2/2



## Specifications

### Specifications

The following table lists the specifications for the EV Charging Station.

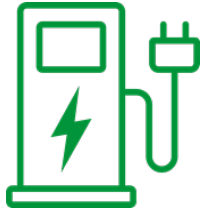
#### Power Cabinet

Item	HPC 175K (1 set) (150 kW power config)	HPC 175K (2 sets) (350W power config)
AC Input	Voltage	3-phase, 480y/277 (4-wire)
	Voltage Range	10 %
	Frequency	50/60 Hz
	Current (peak)	227 A
DC Output	Max. Voltage	DC 200 – 920 V
	Max. Power	161 kW
Power Factor	More than 0.99	
Efficiency (full load)	94.5 %	
Mfr recommended overcurrent protection	300 A	
Total Harmonic Distortion	3.9	
Operating Temperature	-30 °C – +50 °C (-22 °F – +122 °F)	
Humidity	95 %	
IP Rating	Nema, Type 3R, Rain Proof	
IK Rating	IK08	
Short Circuit Rating	65 kA (part number starting with QB)	
Altitude	3,000 m	
Power Cabinet Weight	882 lb (400kg)	1,764 lb (800kg)
Power Cabinet Dimensions (W x D x H)	41.97 x 29.45 x 83.39 in (1,066 x 748 x 2,118 mm)	83.94 x 22.05 x 83.39 in (2,132x 748 x 2,118 mm)

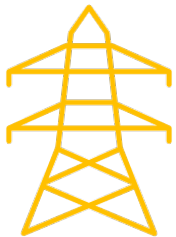


# PPL ELECTRIC UTILITIES

## Adding Electrical Load



Engage with us as soon as you're considering becoming an electric vehicle host site.



We'll determine the best supply method to provide safe and reliable power.



Process takes approximately 12 months.





## Feasibility Study Request Process

### What the Customer Provides

- PPL Electric Grid or Lat/Long
- Desired in-service date
- Number of chargers
- Charger level
- Charger output (kW)

### What PPL Electric Utilities Provides

- 10 business day turnaround with high-level details about the project
- Timeframe for completion of all upgrades
- Cost for completion of all upgrades



Submit requests to [PPLElectricEV@pplweb.com](mailto:PPLElectricEV@pplweb.com)



# PA MUNICIPAL ELECTRIC ASSOCIATION

PMEA represents the 35 boroughs across the Commonwealth that deliver electric power to their residents and businesses.

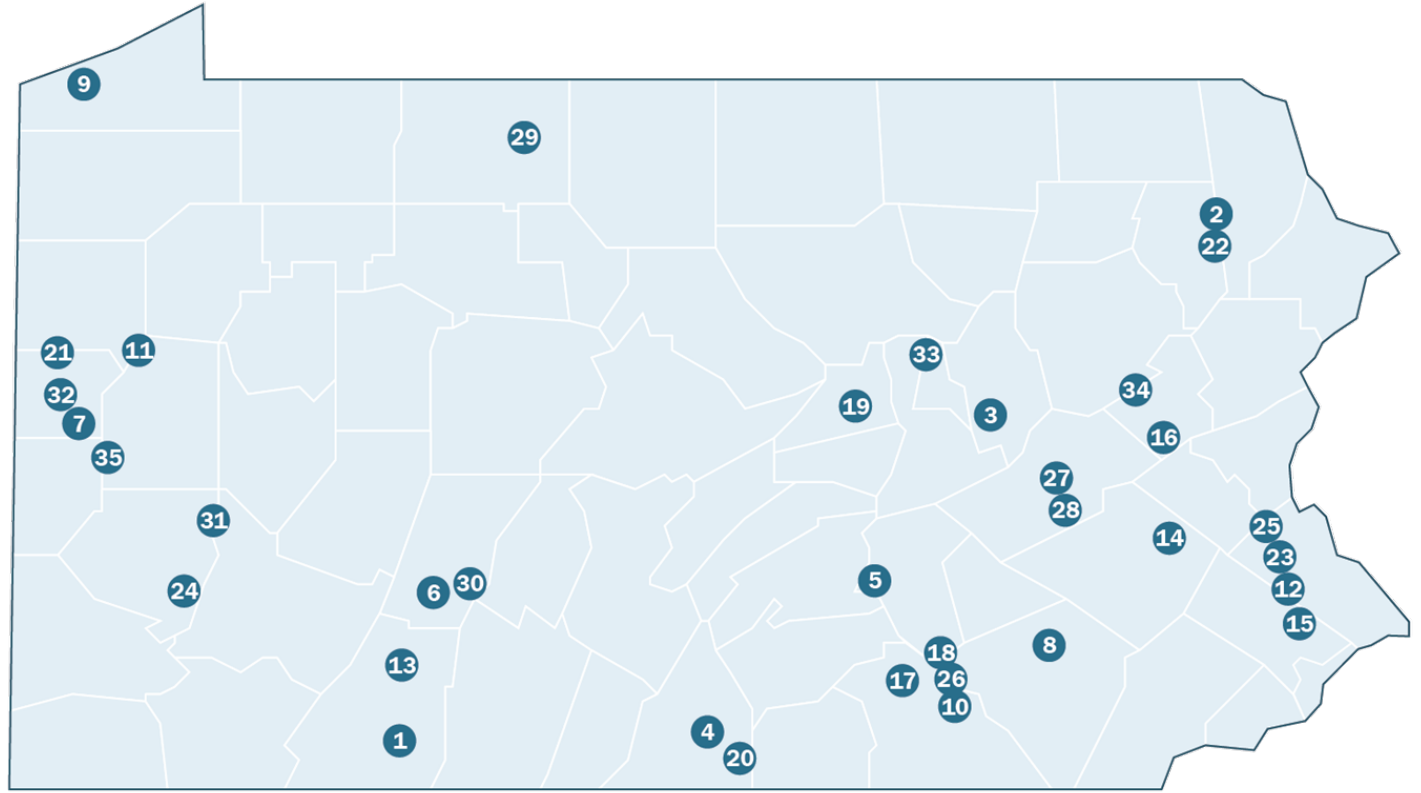
Contact: Diane Bosak,  
Executive Director

717-489-2088

Email:

[bosak@papublicpower.org](mailto:bosak@papublicpower.org)

[www.papublicpower.org](http://www.papublicpower.org)



1. Berlin	7. Ellwood City	13. Hooversville	19. Mifflinburg	25. Quakertown	31. Tarentum
2. Blakely	8. Ephrata	14. Kutztown	20. Mont Alto	26. Royalton	32. Wampum
3. Catawissa	9. Girard	15. Lansdale	21. New Wilmington	27. St. Clair	33. Watsontown
4. Chambersburg	10. Goldsboro	16. Lehighton	22. Olyphant	28. Schuylkill Haven	34. Weatherly
5. Duncannon	11. Grove City	17. Lewisberry	23. Perkasie	29. Smethport	35. Zelenople
6. East Conemaugh	12. Hatfield	18. Middletown	24. Pitcairn	30. Summerhill	

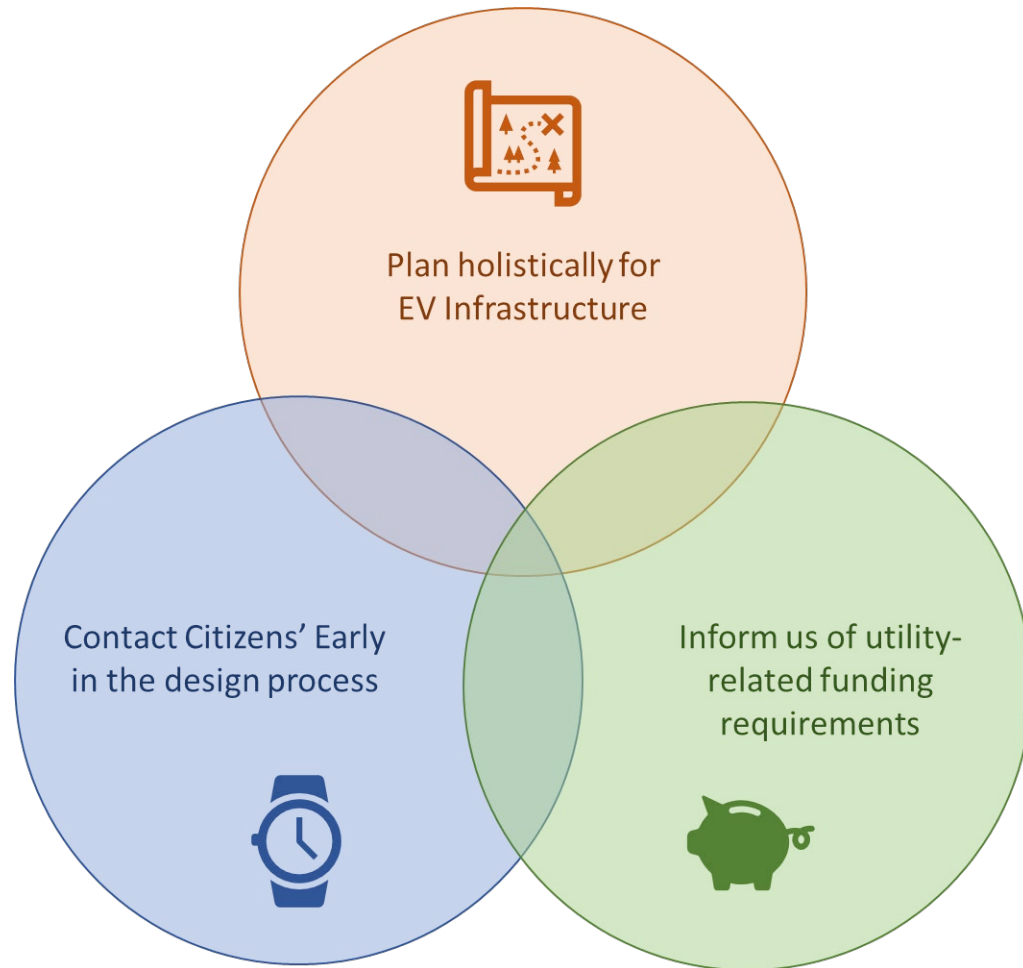


# CENTRAL ELECTRIC COOPERATIVE

- Contact Central Electric's Commercial Accounts manager to request service:
  - Chris Panian, 800-521-0570 x2134, email: [cpanian@central.coop](mailto:cpanian@central.coop)
- Provide Detailed information about proposed EV charger:
  - Service Entrance Size
  - Size of load in kW
  - Requested Voltage
  - Estimated transformer size
  - Requested location
  - Account Number
  - Nearest Poll Number
- Central Electric will provide a quote for line extension charges and any system upgrades required. An Electric Service Agreement may be required.



# CITIZENS' ELECTRIC COMPANY



**Website:** [citizenselectric.com/safety-service/#ev](https://citizenselectric.com/safety-service/#ev)  
**Email:** [operations@citizenselectric.com](mailto:operations@citizenselectric.com)

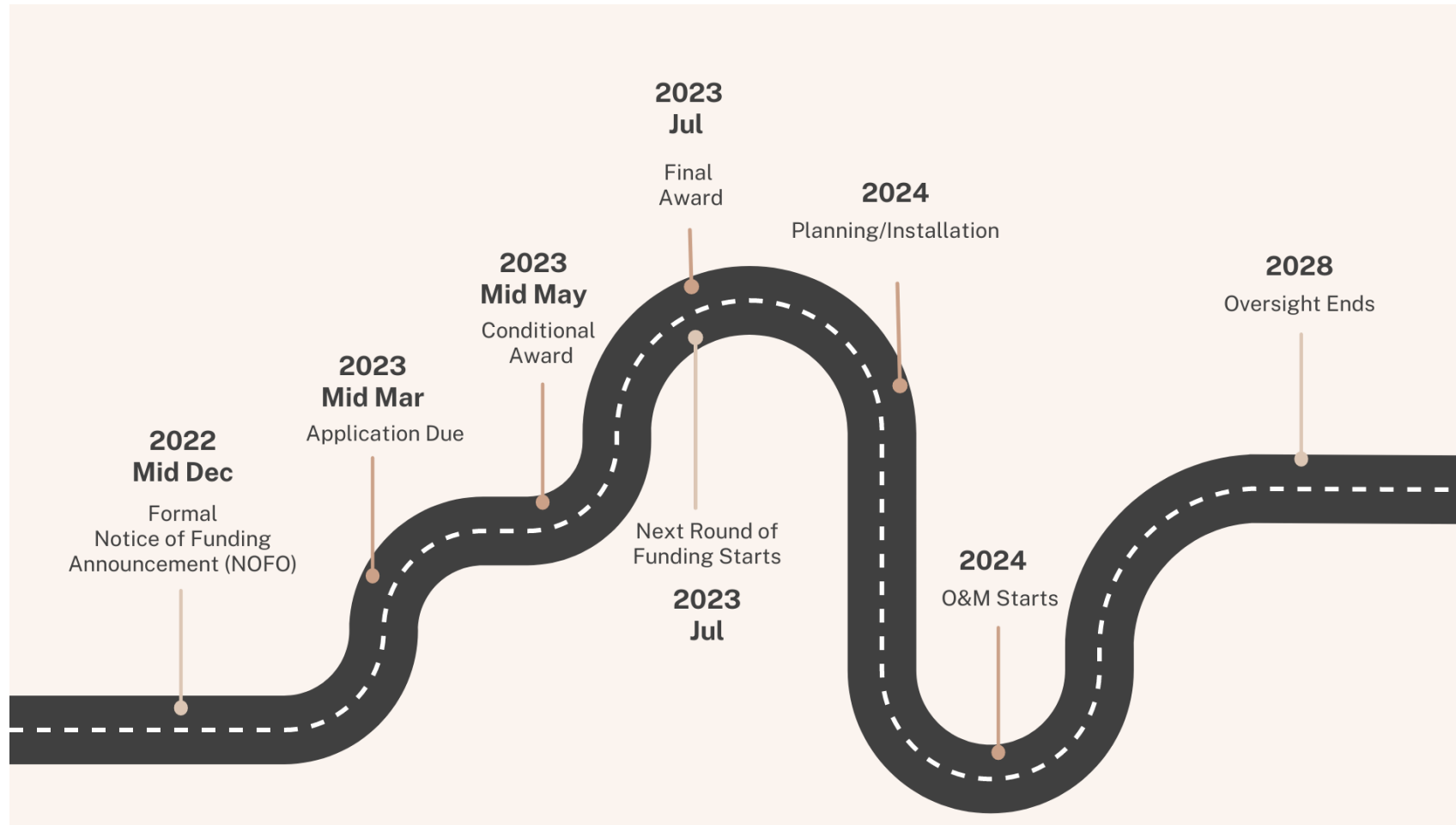
- Municipal/Regional Organizations: Share the big picture
  - Let us know the whole plan instead of one service at a time
  - Funding Requirements – What utility information is required?
- All Installations:
  - Inform Citizens' of Level 2 or 3 Installations
  - Provide timely and complete information
- Service Applications:
  - Same path as Commercial/Industrial Service, for now...
  - Time is critical
    - Long lead-time materials
    - Substantial construction for remote locations



# **PENNDOT NEVI GRANT PROGRAM - NEXT STEPS**

Natasha Fackler

# ANTICIPATED TIMELINE



\* 5 Year O&M starts once Installation is completed and approved for O&M.

\* These dates are representative and are subject to change based on applicants' feedback. NOFO will identify specific dates.



# FUTURE NEVI DISCRETIONARY PROGRAM



**Discretionary Grant Program - \$2.5 billion for all alternative fuels** (EV, compressed natural gas, hydrogen, etc.).

These funds **focus on AFC development and community alternative fueling projects.**

- **\$1.25 billion** is for designated AFCs while the other half is for community funding. Eligible entities include States, Local governments, Planning Agencies (MPOs/RPOs), Transit and Port Authorities, and Tribal governments.
- **\$1.25 billion** is designated for **Community fueling projects** must be on any public road or in other publicly accessible locations.

Priority will be given to projects in rural areas, low-to-moderate income neighborhoods, and communities with a low ratio of private parking spaces to households or a high ratio of multiunit dwellings to single family homes.





# RANGE OF GRANTS & INCENTIVES AVAILABLE























































Federal Tax Grants

DEP Grants

DOT Grants

Utility Programs

DOT Funding and Financing Programs with EV Eligibilities\*

	FY 2022 <sup>1</sup> AMOUNT						
<b>FORMULA PROGRAMS</b>							
National Highway Performance Program (NHPP)	\$28.4 B <sup>2</sup>						
Surface Transportation Block Grant Program (STBG)	\$12.5 B <sup>2,3</sup>						
Congestion Mitigation & Air Quality Improvement Program (CMAQ)	\$2.5 B <sup>2</sup>						
National Highway Freight Program (NHFP)	\$1.4 B <sup>2</sup>						
State Planning and Research (SPR)	\$983.3 M <sup>4</sup>						
Metropolitan Planning (PL)	\$438.1 M <sup>2</sup>						
Carbon Reduction Program	\$1.2 B <sup>2,5</sup>						
National Electric Vehicle (NEVI) Formula Program	\$685 M <sup>2,5,6</sup>						
<b>DISCRETIONARY PROGRAMS</b>							
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) (formerly known as BUILD)	\$1.5 B						
Infrastructure for Rebuilding America (INFRA) Grant Program	\$1.64 B <sup>2,7</sup>						
Advanced Transportation and Technologies and Innovative Mobility Deployment	\$60 M <sup>2</sup>						
Discretionary Grant Program for Charging and Fueling Infrastructure	\$300 M <sup>2,5</sup>						
Rural Surface Transportation Grant	\$300 M <sup>2,5</sup>						



Construction and installation of EV charging infrastructure including parking facilities and utilities.



Workforce development and training related to EV infrastructure.



EV acquisitions and engine conversions - cars or trucks.



Planning for EV charging infrastructure and related projects.



Construction and installation of EV charging infrastructure to support operational, resiliency, national energy security, environmental, and community goals for freight transportation.



Installation of EV charging infrastructure as part of transit capital projects eligible under chapter 53 of title 49, United States Code.



# REFERENCES & RESOURCES

Added Post-webinar for clarity/assistance

# NEVI AFC QUALIFYING CHARGERS

DC Fast Charging

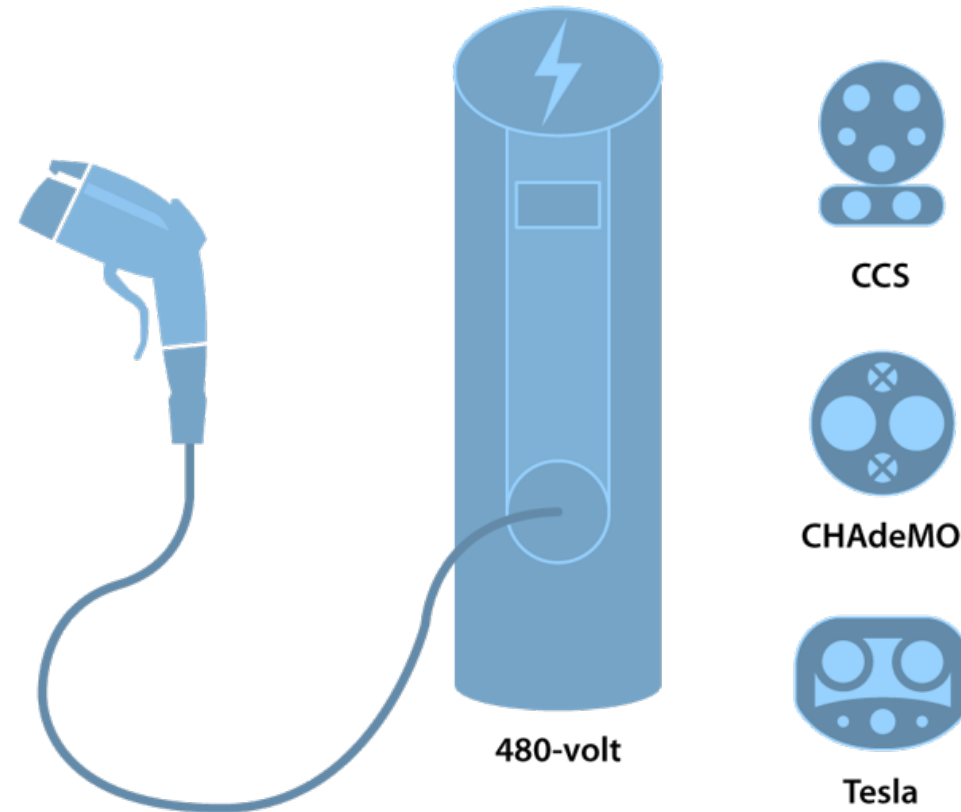
Public, non-proprietary

4 ports

CCS Connectors

At least 150kw power per port (600kw total)

Within 1-mile of highway, 50 miles of the next station



# PRIORITY LOCATIONS

## PRIORITY I:

Selected via gap analysis to most likely meet AFC build-out

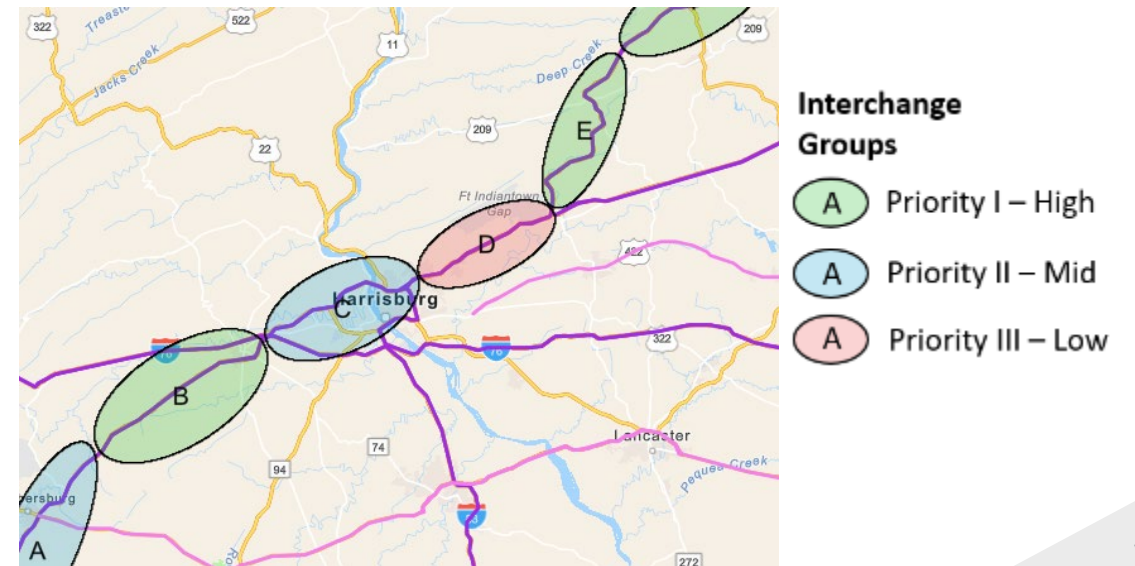
## PRIORITY II:

Interchanges in locations closer to existing sites/or likely to be redundant.

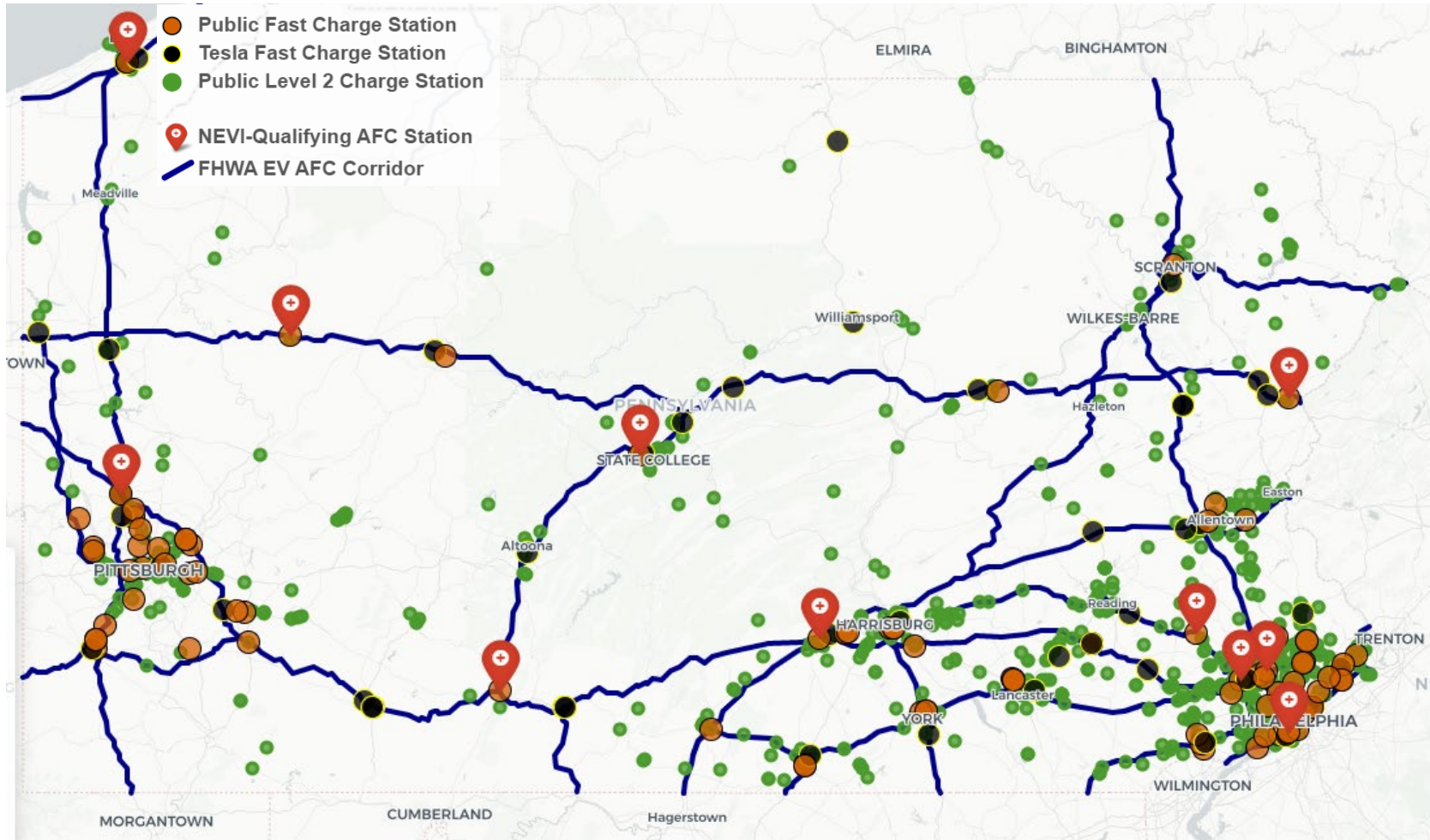
## PRIORITY III:

Interchanges that already has NEVI-qualifying EV charging site.

- Round 1 will focus on Pennsylvania's primary and auxiliary interstate AFC network and includes 11 primary interstates and four (4) auxiliary interstates
- PennDOT's interchange group map shows the ~80 gaps labeled as Priority I, II, or III
- At least one site at an interchange within each Priority I group will be selected first, followed by one site within each of the Priority II groups of interchanges.



# PUBLIC CHARGING STATIONS



- Websites
- Apps
- Trip Planners
- Resources:
  - 511PA
  - [Penndot.pa.gov/EV](http://Penndot.pa.gov/EV)
  - Alternative Fuel Data Center (AFDC)
  - PlugShare
  - ChargeHub
  - In-car support

**Over 2,800 public plugs at over 1,100 locations**

Map available at: [National Electric Vehicle Infrastructure \(NEVI\) Formula Program \(pa.gov\)](http://National Electric Vehicle Infrastructure (NEVI) Formula Program (pa.gov))



# RESOURCES

- [Electric Vehicles and Alternative Fuels \(pa.gov\)](#)
- [National Electric Vehicle Infrastructure \(NEVI\) Formula Program \(pa.gov\)](#)
- [EV Mobility Plan \(pa.gov\)](#)
- [EV Equity Principles\\_02072022.pdf \(pa.gov\)](#)
- [Interactive EV Charging Location Map – PennDOT](#)
- [90-Day NEVI Federal Guidance](#)
- [FHWA NEVI Guidance FAQ](#)
- [Federal Register - NEVI Proposed Rulemaking](#)
- [Driveelectric.gov](#)



# **PENNDOT NEVI GRANT PROGRAM - Q&A**

Natasha Fackler



# CONTACT INFORMATION

PENNDOT EV TEAM: [RA-PDEVCORRIDORS@PA.GOV](mailto:RA-PDEVCORRIDORS@PA.GOV)

**Provide your feedback  
about this session!**

Scan the QR code here before you go!

