PREPARING & PLANNING FOR EV CHARGING INFRASTRUCTURE FUNDING

ELECTRIC VEHICLE STAKEHOLDER OUTREACH

APRIL 2022

pennsylvania
DEPARTMENT OF TRANSPORTATION

DISCUSSION NOTES

- Please mute your line when not talking
- Raise hand if you wish to speak or ask questions
- Use the chat box to provide comments
- Please introduce yourself in the chat

AGENDA

- *Welcome & Introductions*
- Background on **BIL** – **NEVI** - **AFC**
- Understanding Our Charging Gaps and Needs
- NEVI State Plan Outline
- Questions for the group

Background on BIL – NEVI - AFC

BIPARTISAN INFRASTRUCTURE LAW (BIL)

Today's Focus (NEVI)

[Division J]

[NEW] National Electric Vehicle Formula Program (formula and discretionary*)

Infrastructure

Purpose	Strategically deploy electric vehicle (EV) charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability
Funding	$5 B (FY 22-26) in advance appropriations from the GF
Recipients	• States (including DC and Puerto Rico)
Distribution formula	• Same shares as Federal-aid highway apportionments
Other key provisions	• Funded projects must be located along designated alt fuel corridors • Sets aside 10% of funding for discretionary grants to State and local governments that require additional assistance to strategically deploy EV charging infrastructure • State must submit plan to DOT describing planned use of funds • If State doesn't submit plan (or carry it out), DOT may withhold or withdraw funds and redistribute within the State, or to other States • Establishes DOT-DOE Joint Office of Energy and Transportation • Requires DOT to designate national EV charging corridors to support freight and goods movement

** Program sets aside funds for discretionary technical assistance grants; also if DOT withholds or withdraws funding from a State, DOT may award funds to local governments in the same State.*

§ 11401

[NEW] Charging and Fueling Infrastructure (discretionary)

Purpose	Deploy electric vehicle (EV) charging and hydrogen/propane/natural gas fueling infrastructure along designated alternative fuel corridors and in communities
Funding	$2.5 B (FY 22-26) in Contract Authority from the HTF
Eligible entities	• State or political subdivision of a State • MPO • Local government • Special purpose district or public authority with a transportation function • Indian Tribe • Territory
Eligible projects	• Acquisition and installation of publicly accessible EV charging or alternative fueling infrastructure • Operating assistance (for the first 5 years after installation) • Acquisition and installation of traffic control devices
Other key provisions	• Requirement to redesignate alternative fuel corridors and establish a process to regularly redesignate these corridors • Set-aside (50%) to install EV charging and alternative fueling infrastructure on public roads or in other publicly accessible locations, such as parking facilities at public buildings, schools, and parks

https://www.fhwa.dot.gov/bipartisan-infrastructure-law/evs.cfm

HOW MUCH NEVI FUNDING FOR PA?

- National Electric Vehicle Infrastructure (NEVI) Formula Program
  - **$171.5 million to PA over 5-year period**
  - **$25.4 million to PA in FY2022**

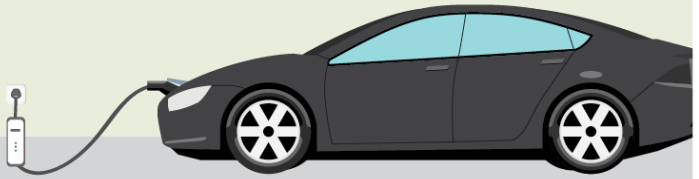
Estimated to equate to **40 or more new fast charge stations a year** (*assuming new charging facility at $600k each with a 20% match*)

- Discretionary Grant Program for Charging and Fueling Infrastructure
  - **$2.5 billion across all states**

NEVI FOCUS ON DC FAST CHARGING

KNOW YOUR EV CHARGING STATIONS

AC Level One



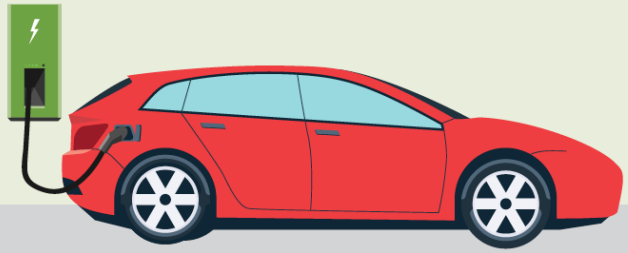
VOLTAGE
120v 1-Phase AC

AMPS
12–16 Amps

CHARGING LOADS
1.4 to 1.9 KW

CHARGE TIME FOR VEHICLE
3–5 Miles of Range Per Hour

AC Level Two



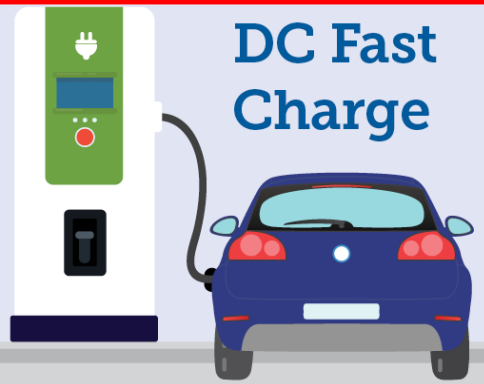
VOLTAGE
208V or 240V 1-Phase AC

AMPS
12–80 Amps (Typ. 32 Amps)

CHARGING LOADS
2.5 to 19.2 kW (Typ. 7 kW)

CHARGE TIME FOR VEHICLE
10–20 Miles of Range Per Hour

DC Fast Charge



VOLTAGE
208V or 480V 3-Phase AC

AMPS
<125 Amps (Typ. 60 Amps)

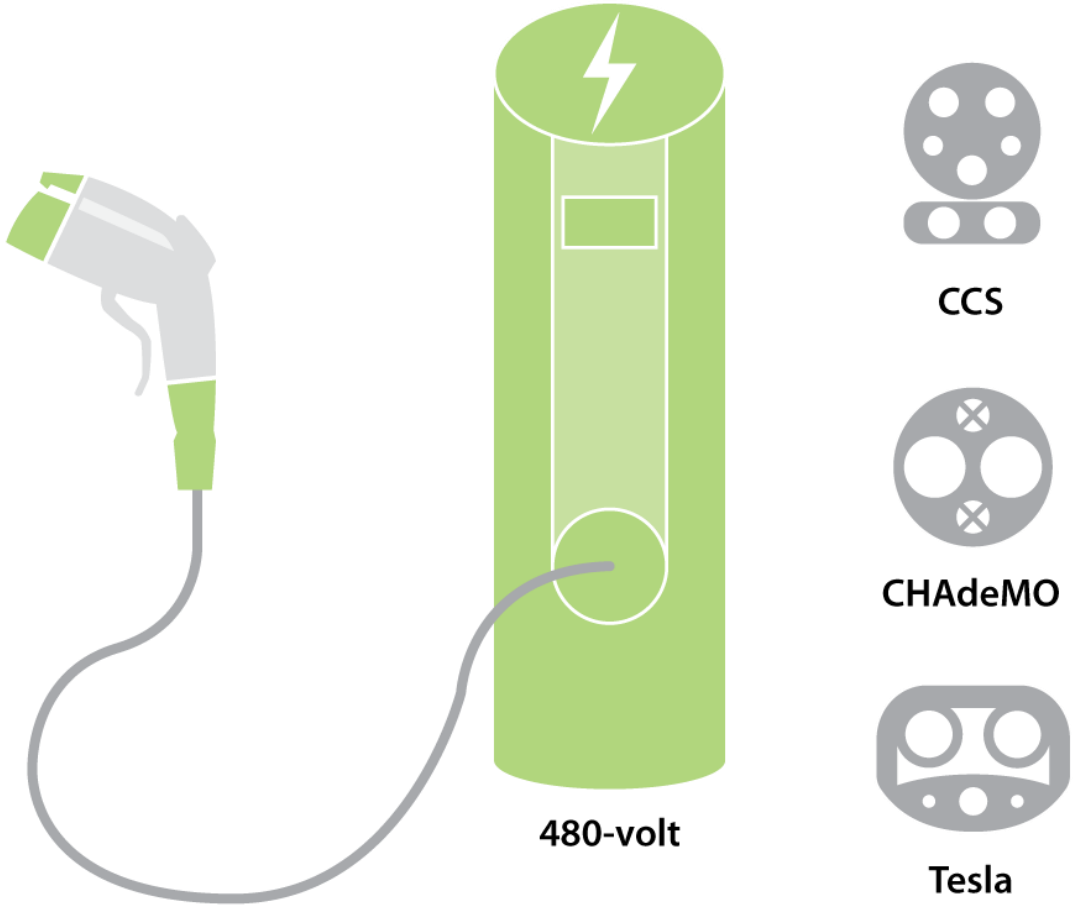
CHARGING LOADS
50 – 350kW

CHARGE TIME FOR VEHICLE
80% Charge in 20–30 Minutes

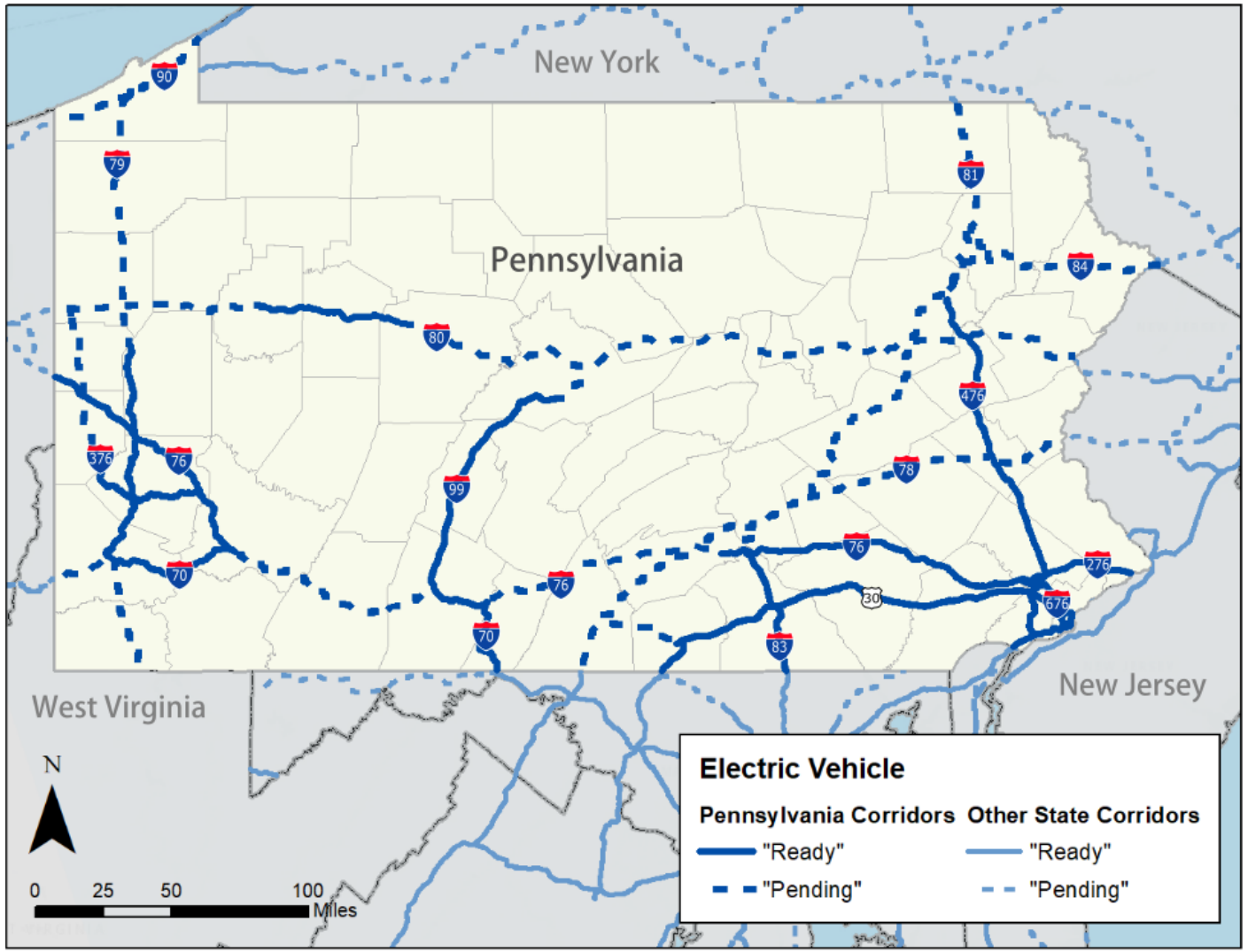
NEVI QUALIFYING FAST CHARGERS

- Public (Tesla doesn’t count now)
- 4 ports
- CCS Connectors
- At least 150kw power per port (600kw total)
- Within 1-mile of highway

DC Fast Charging



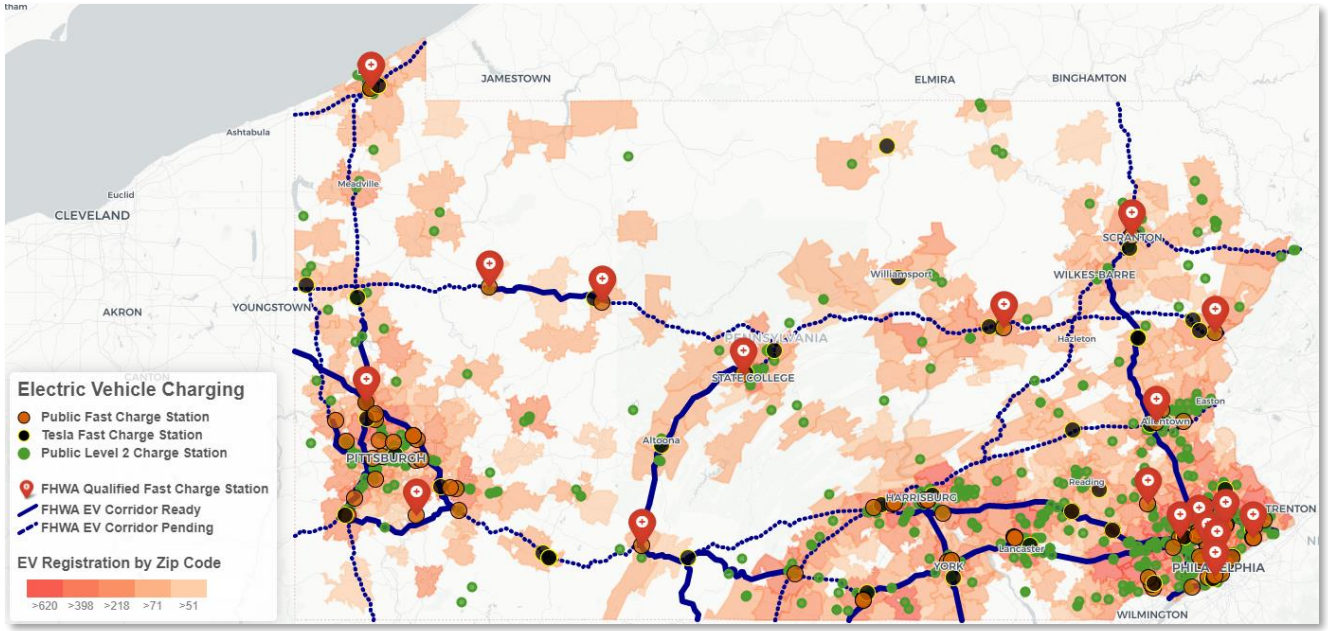
ALTERNATIVE FUEL CORRIDORS (AFC)



- AFC is a plan for build-out of DC fast chargers (DCFC)
- PennDOT has nominated corridors over 5 rounds - includes all interstates
- Only non-interstates nominated are portions of US 30 and US 15
- AFC corridors designated as either “Pending” or “Ready” based on older criteria
- “Ready” means qualifying stations not more than 50 miles apart
- NEVI funding can be applied to all AFC corridors (Pending or Ready)
- NEVI funding <u>must</u> be applied to AFC until a “Build-Out” certification by FHWA

MAPS AND INITIAL GAP ASSESSMENT

Interactive Map of Current Station Locations



https://tmp-map.s3.amazonaws.com/dot-sample/pa-ev-stations.html

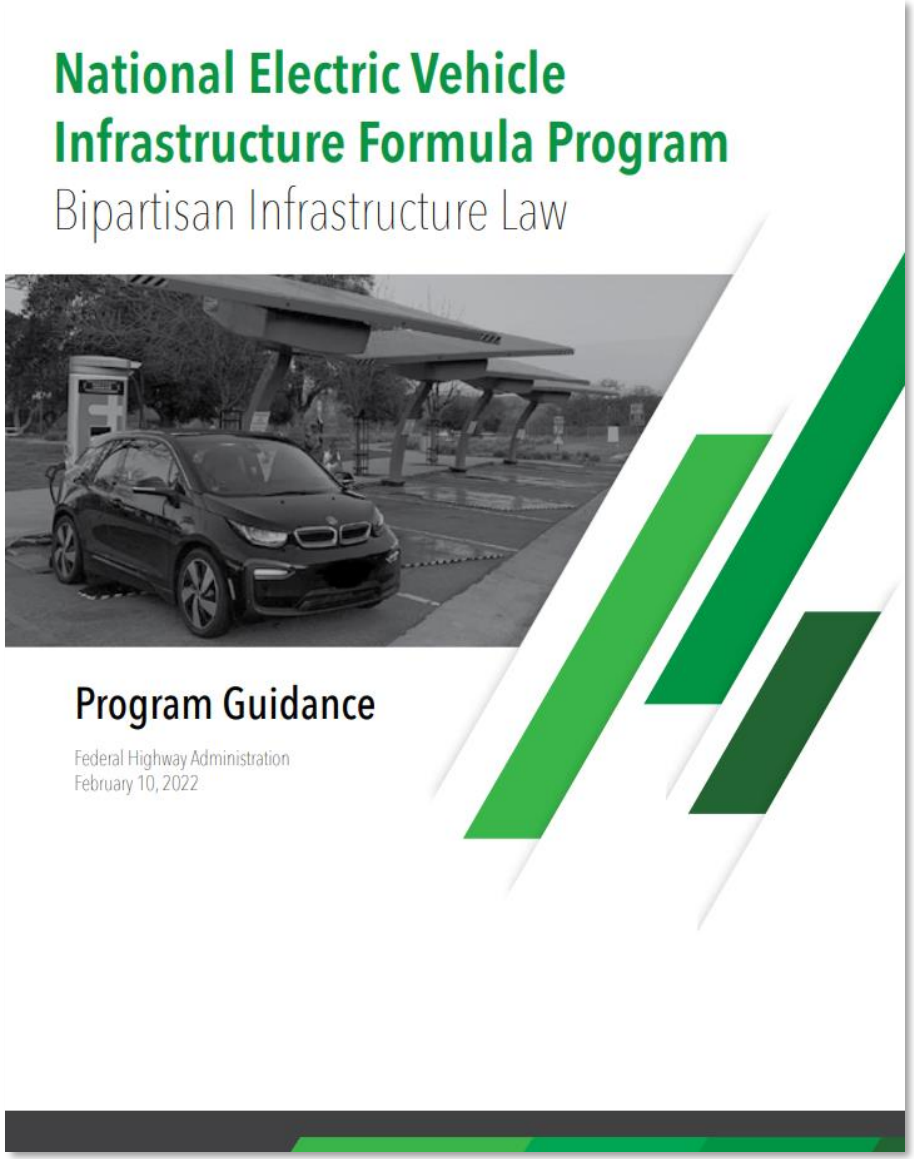
Corridor	Gaps (Current AFC Criteria)
I-70	>50 mi west of Bedford (into OH)
	>50 mi southeast of Bedford (into MD)
I-76	>50 mi west of Cranberry (into OH)
	Cranberry to Bedford
	Bedford to King of Prussia
I-78	Entire corridor
I-79	>50 mi north of Cranberry (to end of corridor in Erie*)
	>50 mi south of Cranberry (into VA)
I-80	Girard (OH) to Clarion
	Clarion to East Stroudsburg
	None: **44 mi** East Stroudsburg to new station in Denville, NJ
I-81	Entire corridor
I-83	Entire corridor
I-84	Entire corridor
I-90	>50 mi. west of Erie (into OH)
	>50 mi. east of Erie (into NY)
I-95	Entire corridor
I-99	Bedford to State College
	>50 mi north of State College (onto I-80)
I-276	>50 mi. east of King of Prussia (onto I-95)
I-376	Entire corridor
I-476	>50 mi north of Plymouth Meeting (into NY)
	>50 mi south of Plymouth Meeting (into DE)
US-30	Entire corridor

Legend:	
	No Gap
	Gap on "Ready" Corridor
	Gap on "Pending" Corridor
	Gap on "Ready" & "Pending" Corridor

Gaps will be changing as new stations are constructed

PENNDOT EFFORTS UNDERWAY

1. **Address National Electric Vehicle Infrastructure (NEVI) Program – AFC Focus**
   - Rural Charging Toolkit Issued Early February
   - Initial NEVI Plan Guidance Issued February 10th
   - ***Critical Technical Guidance is Expected on May 13th***
   - State EV Infrastructure Plan Required to be submitted to FHWA by August 1st
2. **Preparing for Discretionary Funding Beyond AFC**
   - Position our Planning Partners Take Advantage of Discretionary
   - $ and guidance [Nov]



ESTABLISHING NEVI GOALS (DRAFT)

Strategically deploy a convenient, reliable, affordable, and equitable electric vehicle charging network to support range confidence for Pennsylvanians and visitors.

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 and job impacts.

Develop a charging network to support freight and goods movement through the Commonwealth.

NEVI PLAN OUTLINE

- Introduction
- State Agency Coordination
- Public Engagement
- Plan Vision & Goals
- Existing & Future Conditions
- EV Charging Infrastructure Deployment
- Implementation
- Civil Rights
- ***Equity Considerations***
- Labor & Workforce Considerations
- Cybersecurity
- Program Evaluation
- Discretionary Exceptions

OUTREACH OVERVIEW AND NEXT STEPS

March/April

- Stakeholder Meetings: Planning Partners, Utilities, Local (PSATS, PSABS, County Commissioners, etc.), Electric Vehicle Charging Companies, Advocacy/Equity, Labor/Education, Environment

April 27th

- Legislative Webinar
- General Public Webinar - Register for the Public Webinar

May

- Additional Stakeholder Meetings: Manufacturers/OEMs, Commercial/Freight, Transit, Destinations

June

- Survey tool for feedback on components of the NEVI State Plan

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