



pennsylvania
DEPARTMENT OF TRANSPORTATION

PLANNING FOR A FUTURE WITH ELECTRIC VEHICLES

GETTYSBURG – 10/16/23

COATESVILLE – 10/19/23

WILLIAMSPORT – 10/23/23

ERIE – 11/1/23


READING – 11/2/23

PITTSBURGH – 11/8/23



TONIGHT'S AGENDA

- Welcome and introductions
- Electric Vehicle 101
- National Electric Vehicle Infrastructure (NEVI) Program
 - Round 1 funding opportunity
 - Next steps
- Overview of other Funding Opportunities
- Understanding Your Community Needs
- Open Questions and Answer time



The main reason
we are here
tonight!

WHY TALK ELECTRIC VEHICLES NOW?

EVs More
Affordable & More
People Buying

New **Funding** for
Public Charging

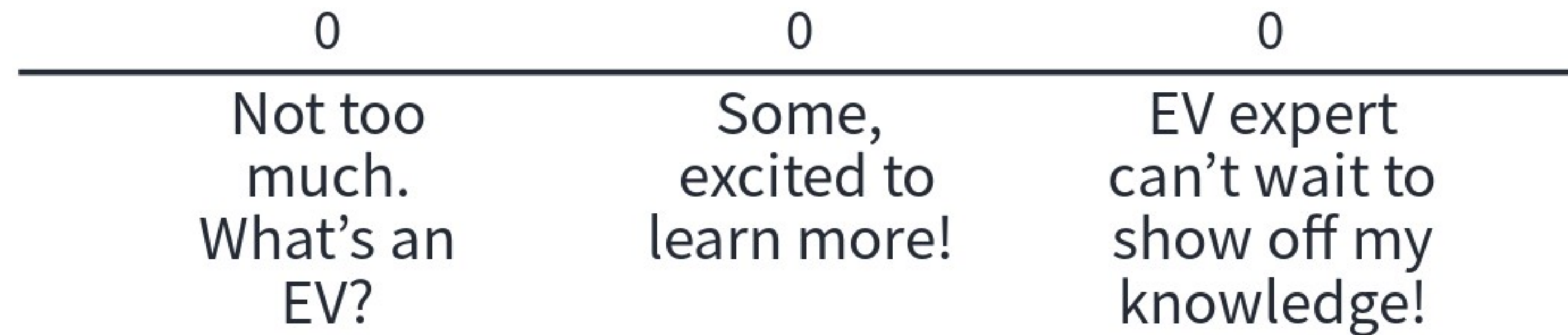
Need for More
Community
Planning &
Education

Identify Key
Opportunities &
Challenges

Ensure EVs &
Funding Benefit
All Populations
(**Equity**)



How much do you know about Electric Vehicles (EVs)?



Who do you represent?



ABOUT ELECTRIC VEHICLES

ELECTRIC VEHICLE BENEFITS



Climate Change

- No direct greenhouse gas (GHG) emissions (tailpipe)
- 3x lower life-cycle emissions (vehicle production, fuel consumption)
- Opportunity to incorporate more renewable energy sources



Air Quality, Noise, Public Health and Equity

- Significantly reduce air and noise pollution
- Improves health outcomes for communities near roadways



Economy













- Save consumers money on fuel and life-cycle maintenance costs
- Electricity rates paid to electric utilities and generation companies stays in the local economy



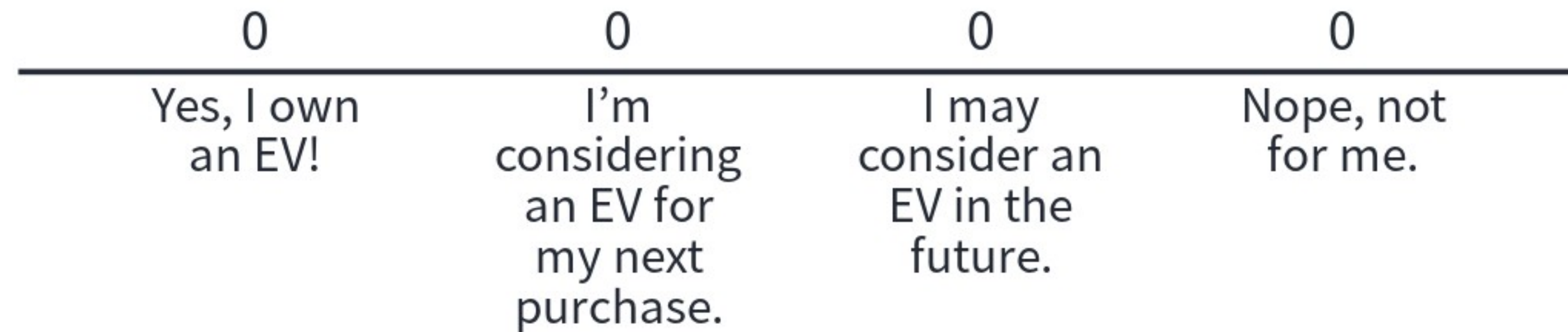
Jobs

- Production of EVs and installation of EV charging infrastructure creates good-paying jobs in clean energy industries.

VEHICLE TYPES

	Conventional Gas	Hybrid Electric Vehicle (HEV)	Plug-in Electric Vehicle (PHEV)	Battery Electric Vehicle (BEV)
Power Source				
Fuel Type				
Emissions				

Do you own or are you considering an EV?















For those of you who don't own an EV, have you ever ridden or driven an EV?

0	0	0	0	0	0	0
Test drive	Car rental	Ride Share/Uber/Lyft	Rode with a friend	Ride & Drive event	Not yet, but thanks for these ideas!	N/A

EV CHARGING

How to Charge Your EV

	 Charge Time	 Charging Locations	 EV Plug Type	 Charging Cost
Level 1	3.5 - 6.5 miles Per Hour	Residential, Workplace	  J1772 Tesla/NACS	\$
Level 2	14 - 35 Miles Per Hour	Residential, Workplace, Destinations	  J1772 Tesla/NACS	\$\$
DC Fast Charge	200+ miles Per Hour	Highways, Communities, Destinations	   CCS CHAdeMO Tesla/NACS	\$\$\$

PARADIGM SWITCH

How Fueling Cars is Changing with Electricity



Conventional Gas

VS.



Electric Vehicles

LOCAL CHARGING STATIONS

Map showing nearby charging stations
for each location

Image acquired from:
[Alternative Fuels Data Center](#)

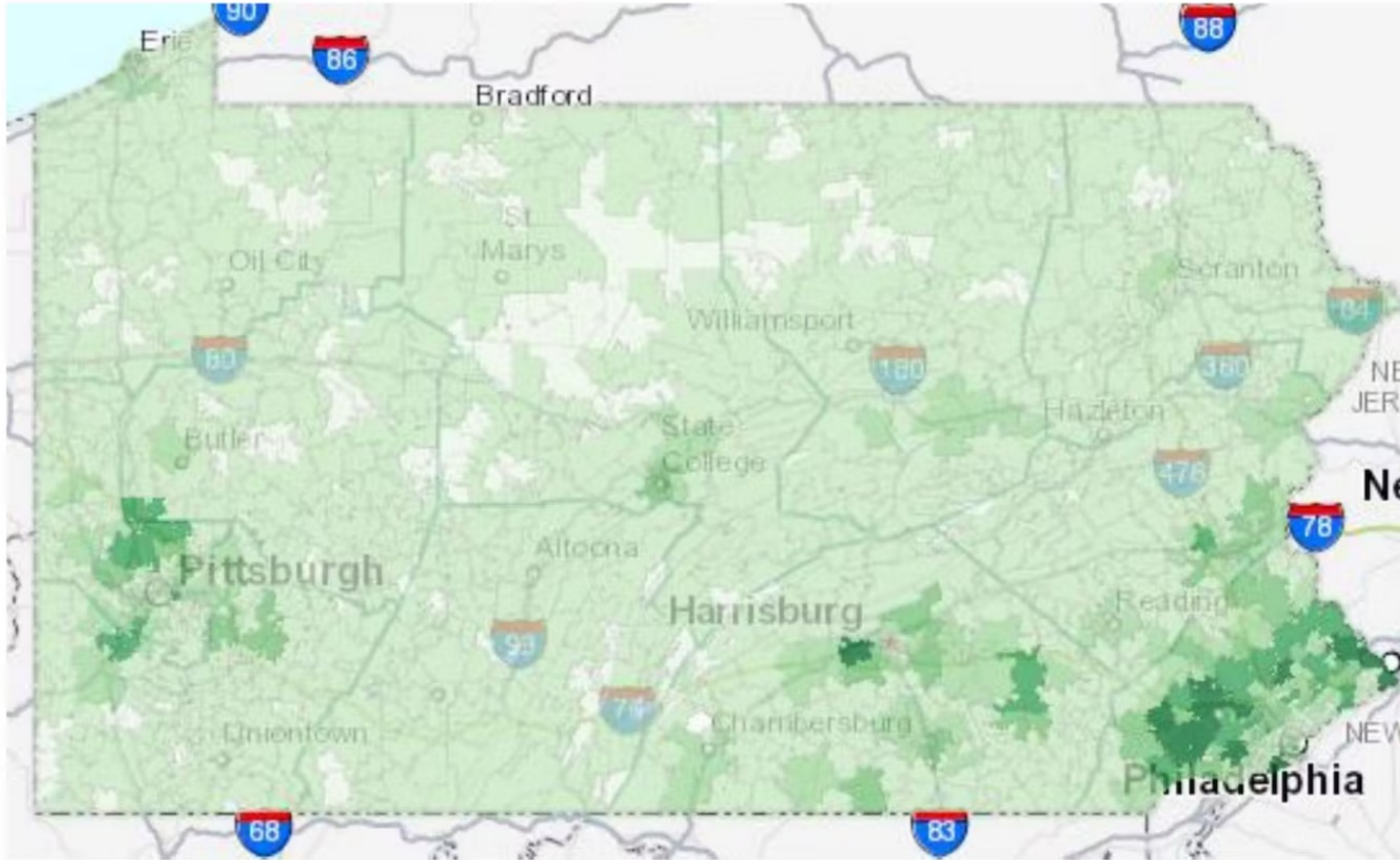
EV REGISTRATIONS IN PA

Fuel type	9/29/2023	Percent Increase since March 7, 2023
BEV	55,627	27.2%
PHEV	31,056	30.3%
HEV	252,719	14.1%
Fuel Cell	1	0.0%
Total	339,403	17.4%

Source: PennDOT registration database



EV REGISTRATIONS IN PA



Electric Vehicle Registrations by Zip Code in Pennsylvania

Battery Electric Vehicle and Plug-in Hybrid Electric Vehicle Registrations June 2023



Map showing nearby EV registrations
for each location

Image acquired from:
[PennDOT EV Registrations Map](#)



Where would you most like to see EV charging in your community (pick 3)



NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI)



OVERVIEW OF PA'S NEVI FORMULA PROGRAM



- 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
- Pre-announcement of Pennsylvania Program – Oct. 12, 2022
- Pennsylvania Program Document Released – January 6, 2023
 - Round 1 Conditional Awards Announced – August 14, 2023
- PennDOT submitted NEVI state plan update on August 1, 2023
 - Plan approved by FHWA on Sept 29, 2023
- The plan is an evolving document updated annually
- Current plan supports allocation of federal funds for federal fiscal year (FFY) 2024



ALTERNATIVE FUEL CORRIDORS



- PennDOT has nominated corridors over 7 rounds - includes interstates and portions of US 30, US 15, Route 1, Route 422, and Interstate 180 - over 1,800 miles of roadway
- NEVI funding must be applied to AFCs until a **“Build-Out”** certification by FHWA

YEARS 1-2 CHARGING FOCUS

DC Fast Charging

Public

4 ports

CCS Connectors

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

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

How to Charge Your EV



Charge Time



Charging Locations

Level 1

3.5 - 6.5 miles
Per Hour

Residential,
Workplace

Level 2

14 - 35 Miles
Per Hour

Residential,
Workplace,
Destinations

**DC Fast
Charge**

200+ miles
Per Hour

Highways,
Communities,
Destinations

PENNDOT NEVI ROUND 1 CONDITIONAL AWARDS



ROUND 1 SELECTION PROCESS

Project selections were based on:

- Build-out AFC network (gaps less than 50 miles and no farther than 1 mile from exit)
- Good customer experience for charging users, including safety
- Consistent reliable charging network
- Variety of funding recipients
- Positive impacts on local economy and workforce opportunities
- Equity/J40 – which includes a welcoming environment safe and accessible for all



- Total Requested Amount: \$165 Million
 - Approximately \$56 million for AFC build out, spread across 2 rounds.
 - Average cost ask~ \$650K
- Total Unique Submissions: 271
 - Not Eligible: 3
 - Organizations: 30

ROUND 1 SELECTION - PRELIMINARY



Recipient	Total
Tesla	10
Applegreen	6
Sheetz	6
Electrify America	4
Francis Energy	4
TA Operating LLC	4
Wawa	4
Love's Travel Stops and County Store	3
Pilot Travel Centers	3
Raceway Management Company	3
BP Products North American	2
6406 Truck Plaza LLC	1
Alnajuk, LLC	1
EVgo	1
Liberty Truck Center	1
Mirabito Holdings, Inc.	1
TH Minit Markets LLC	1
Universal EV LLC	1
Total Count	56

Site Host	Total
Fueling Station/Convenience Store	28
Travel Center/Truck Stop/Service Plaza	21
Shopping/Box Store	4
Restaurant	1
Grocery Store	1
Hotel	1

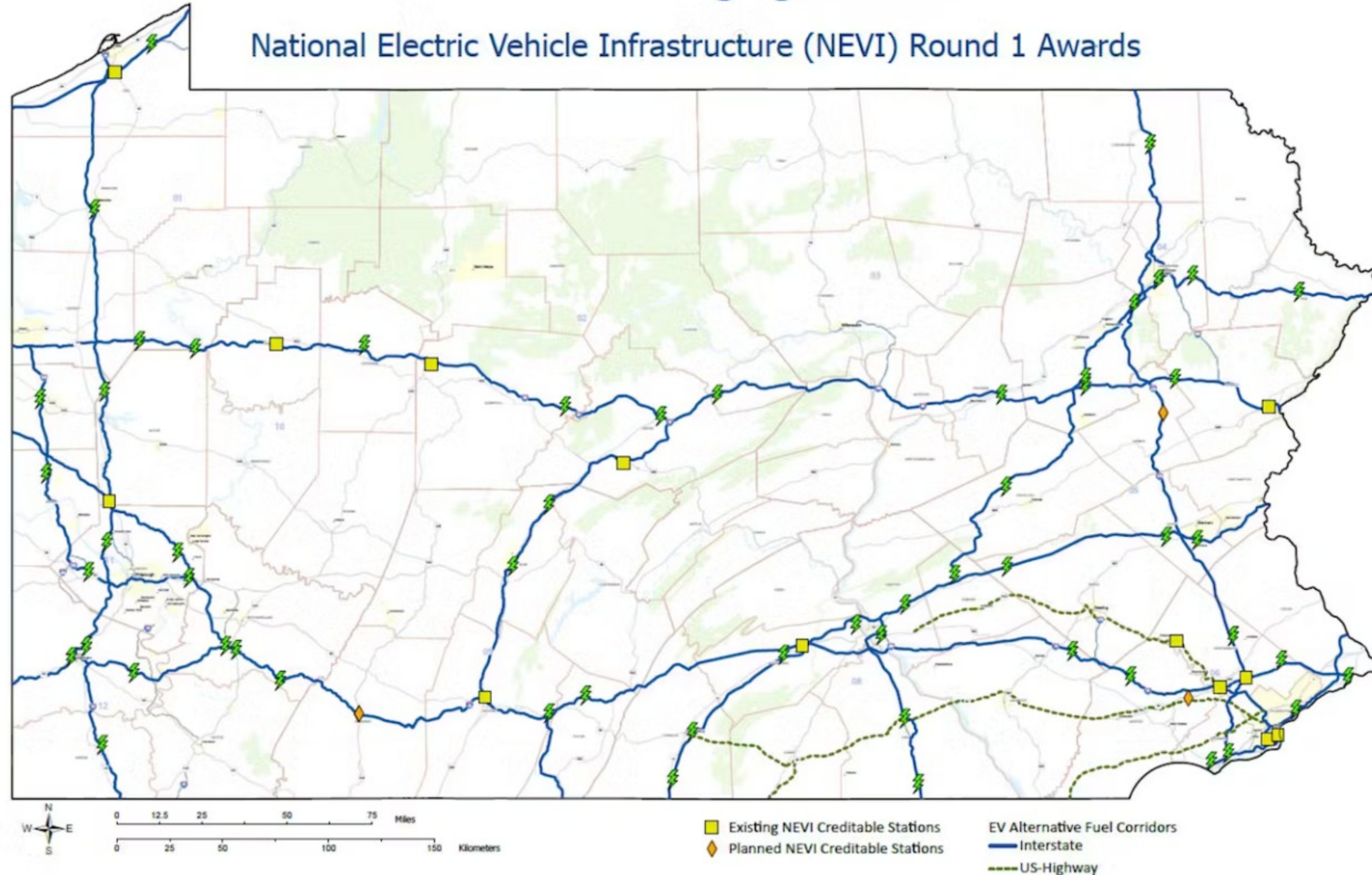
- Number of project selections: 56
- Number of unique recipients: 18
- Total funding award: \$34,821,981
 - Leaves ~\$22 million of FFY 22-23 funds for Round 1A
- 24 projects within Disadvantaged Communities



ROUND 1 CONDITIONAL AWARDS

Electric Vehicle Charging Stations 2023

National Electric Vehicle Infrastructure (NEVI) Round 1 Awards



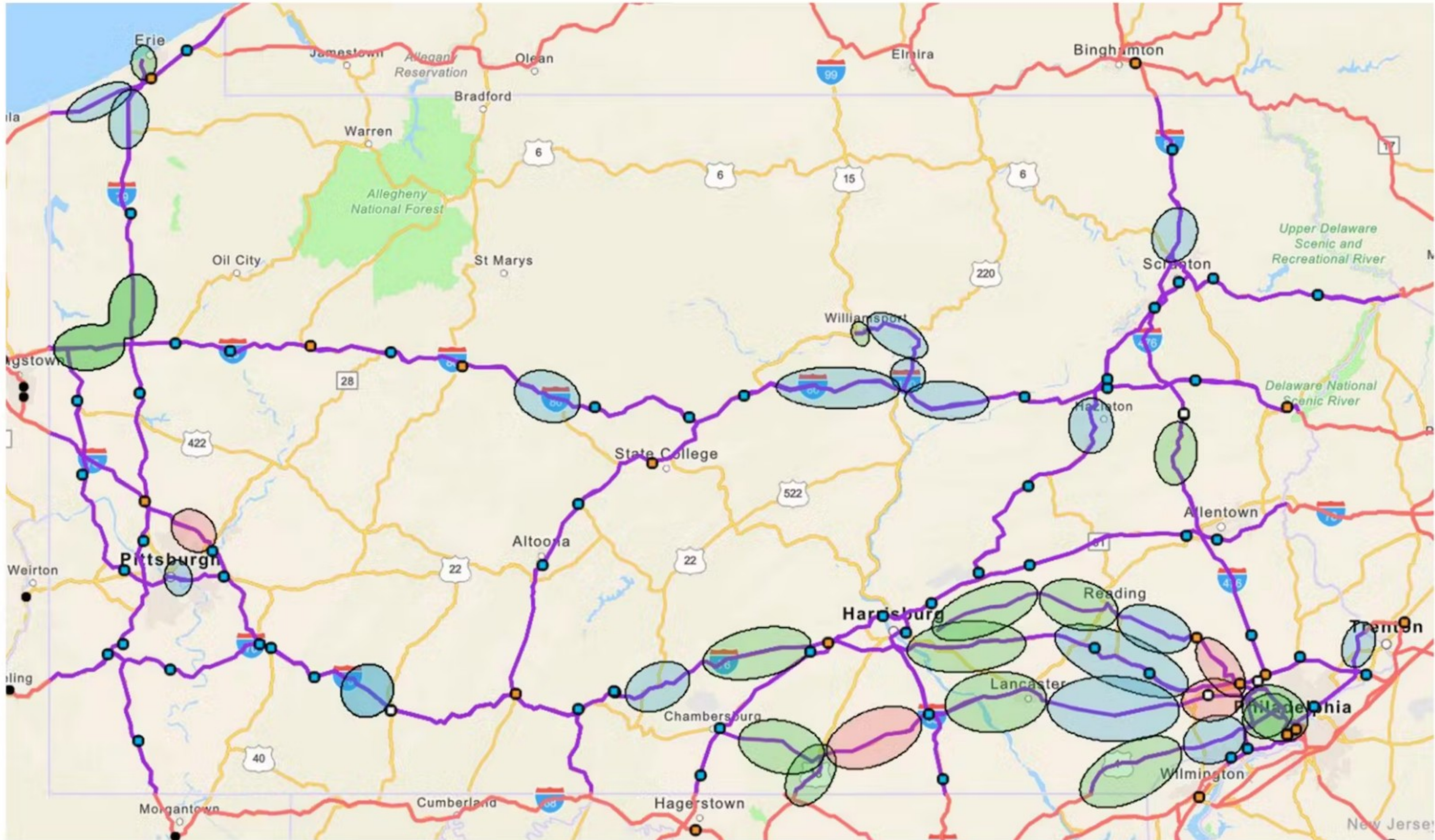
- 56 projects within 37 counties
- \$34.8 million
- 24 projects in or within 1/2 mile of a Disadvantaged Community
- Typical Project Timeline 18-24 months

WHAT'S NEXT

- Support and oversee Round 1 projects
- Public outreach
 - 6 in-person community events
- Round 1A - anticipating about 25-30 sites
 - US Highway AFCs
 - Gaps remain from Round 1
 - \$22 million remaining from FFY 23 funds
- FFY24-26 : Approximately \$106 million for community deployments



ROUND 1A PRIORITY LOCATIONS



OVERVIEW OF FUNDING & INCENTIVES FOR EV & EV CHARGING



CLEAN BUS PROGRAM - EPA

- **\$5 billion over 5 years (FY 2022-2026)**
 - \$2.5 billion for “zero-emission school buses”
 - \$2.5 billion for “clean school buses” (i.e., low-emission)
- **Eligible applicants**
 - State or local governmental entities that are responsible for providing school bus service
 - Eligible contractors
 - Nonprofit school transportation associations
- **2023 Rebate currently open for applications**
 - Due January 31, 2024
 - Review guidelines for eligibility



More information available at
<https://www.epa.gov/cleanschoolbus>

CHARGING AND FUELING GRANT

Charging and Fueling Infrastructure (CFI) Discretionary Grant Program

- Provides \$2.5 billion over 5 years for alternative fueling projects
- \$700 million available in first round of funding (FY 22' and 23') – Closed in June 2023
- Awardees must provide 20% of total project cost

Funding is split between two categories

- Community Charging and Fueling Grants (Community Program)
- Alternative Fuel Corridor Grants (Corridor Program)

Project Merit Criteria

- Safety
- Climate Change, Resiliency, and Sustainability
- Equity, Community Engagement, and Justice40
- Workforce development, job quality, and wealth creation
- CFI Program Vision

Eligible Entities

States, Local Governments, Planning Agencies (MPOs/RPOs), Transit and Port Authorities, and Tribal Governments



EV FEDERAL TAX INCENTIVES

- Effective 1/1/2023, there are four federal EV tax credits/rebates
 - New EV purchase tax credit 30D (individual only)
 - Used EV purchase tax credit 25E (individual only)
 - Commercial vehicle purchase tax credit/rebate 45W (commercial only)
 - Alternative fuel infrastructure installation tax credit/rebate 30C (individual or commercial)
- Effective 1/1/2024 EV purchase tax credits for individuals can be claimed at the time of purchase
- Commercial tax credits can be claimed by tax-exempt organizations as a rebate





Alternative Fuels Incentive Grant Program

2023 Grant Program

- About \$3 million per year to incentivize fleet transitions to alternative fuels
- Eligible project types include incremental cost of fleet vehicle purchase and fleet fueling infrastructure
- Application due date is December 15th



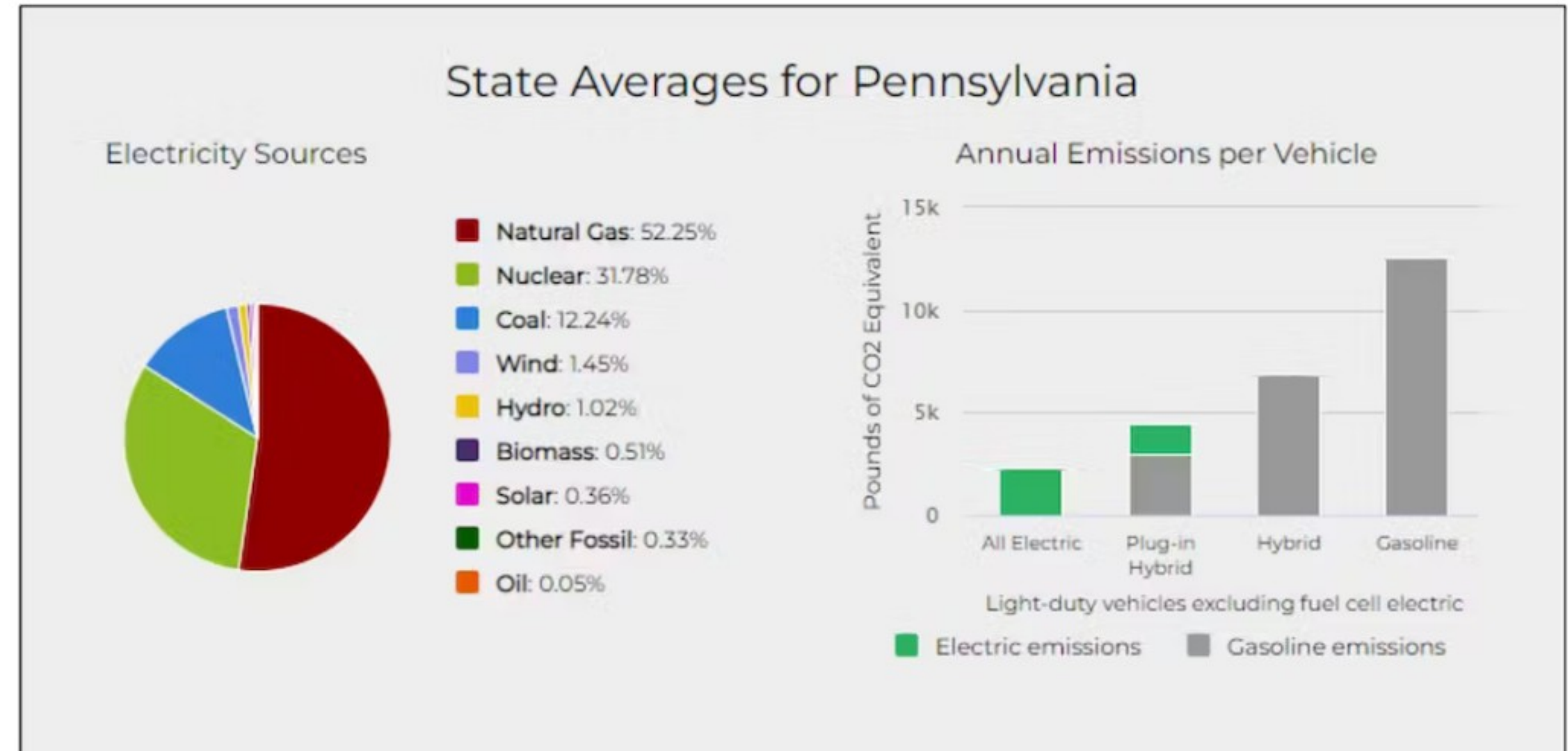
Alternative Fuels Vehicle Rebate

- Alternative Fuel Vehicle Rebate for low- and middle-income individuals:
 - Household income must be under 400% of federal poverty to qualify
 - \$2,000 for new or used electric vehicle
 - \$1,500 for new or used plug-in hybrid
 - Additional \$1,000 for applicants under 200% of federal poverty

UTILITIES & EV

TWO TOUGH GRID QUESTIONS

- How will electric utilities make sure that the grid can handle the DC Fast Chargers coming online as a result of NEVI?
- If we are powering PA's grid with coal, isn't it worse to drive an EV than a gas-powered car?



https://afdc.energy.gov/vehicles/electric_emissions.html

UNDERSTANDING COMMUNITY NEEDS



What do you see as the benefits of Electric Vehicles in your community?

Waiting for responses ...



Do you have any concerns with Electric Vehicles in your community?

Waiting for responses ...



RESOURCES

- [Electric Vehicles and Alternative Fuels \(pa.gov\)](#)
- [National Electric Vehicle Infrastructure \(NEVI\) Formula Program \(pa.gov\)](#)
- [EV Mobility Plan \(pa.gov\)](#)
- [Drive Electric PA Coalition](#)
- [Electric Vehicles in PA](#)
- [PA EV Roadmap](#)
- [Alternative Fuels Incentive Grant](#)
- [Driving PA Forward](#)
- [PennDOT Interactive NEVI Map](#)



What other information or resources do you want about EVs?

Waiting for responses ...



Based on your time here today, what are your thoughts on Electric Vehicles in your community?

Waiting for responses ...



**PLEASE TAKE A
MOMENT TO
COMPLETE THE
EXIT SURVEY!**

Electric Vehicle Charging Community Meeting Survey



QUESTIONS?

CONTACT INFORMATION

**PENNDOT EV TEAM CONTACT:
RA-PDEVCORRIDORS@PA.GOV**

