

# ACCELERATING ACTION ON ELECTRIC VEHICLE (EV) DEPLOYMENT

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## Regional EV Infrastructure Planning

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Climate, Energy, and Air Programs Director

COG Annual Leadership Retreat

July 30 2022



Metropolitan Washington  
Council of Governments

# Agenda

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1. Update on local and regional activities
  - a) Follow up from March COG Board meeting
2. Overview of opportunities
3. Discussion and direction

# Local and Regional Activities Update

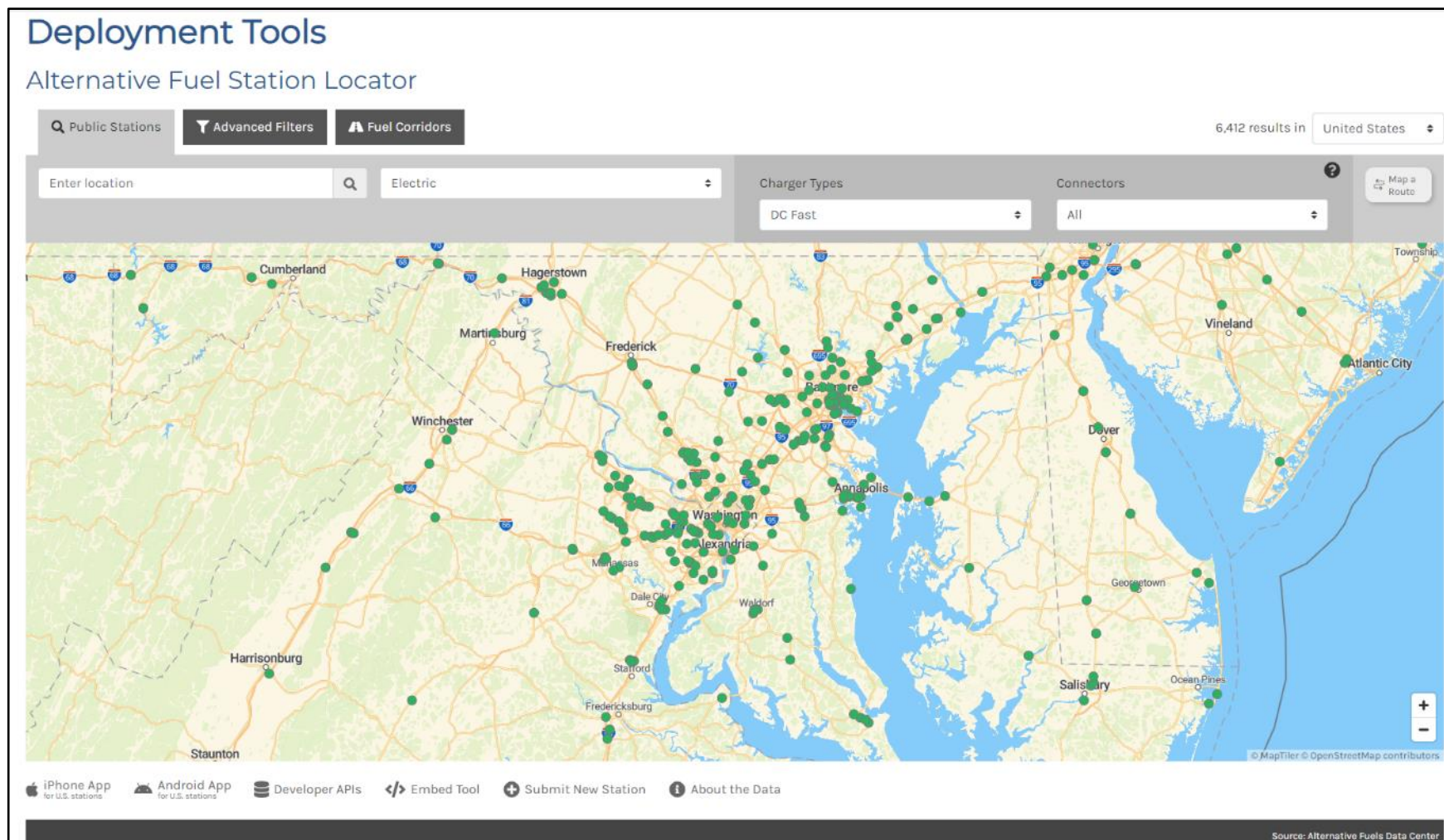


# COG Current EV Activities

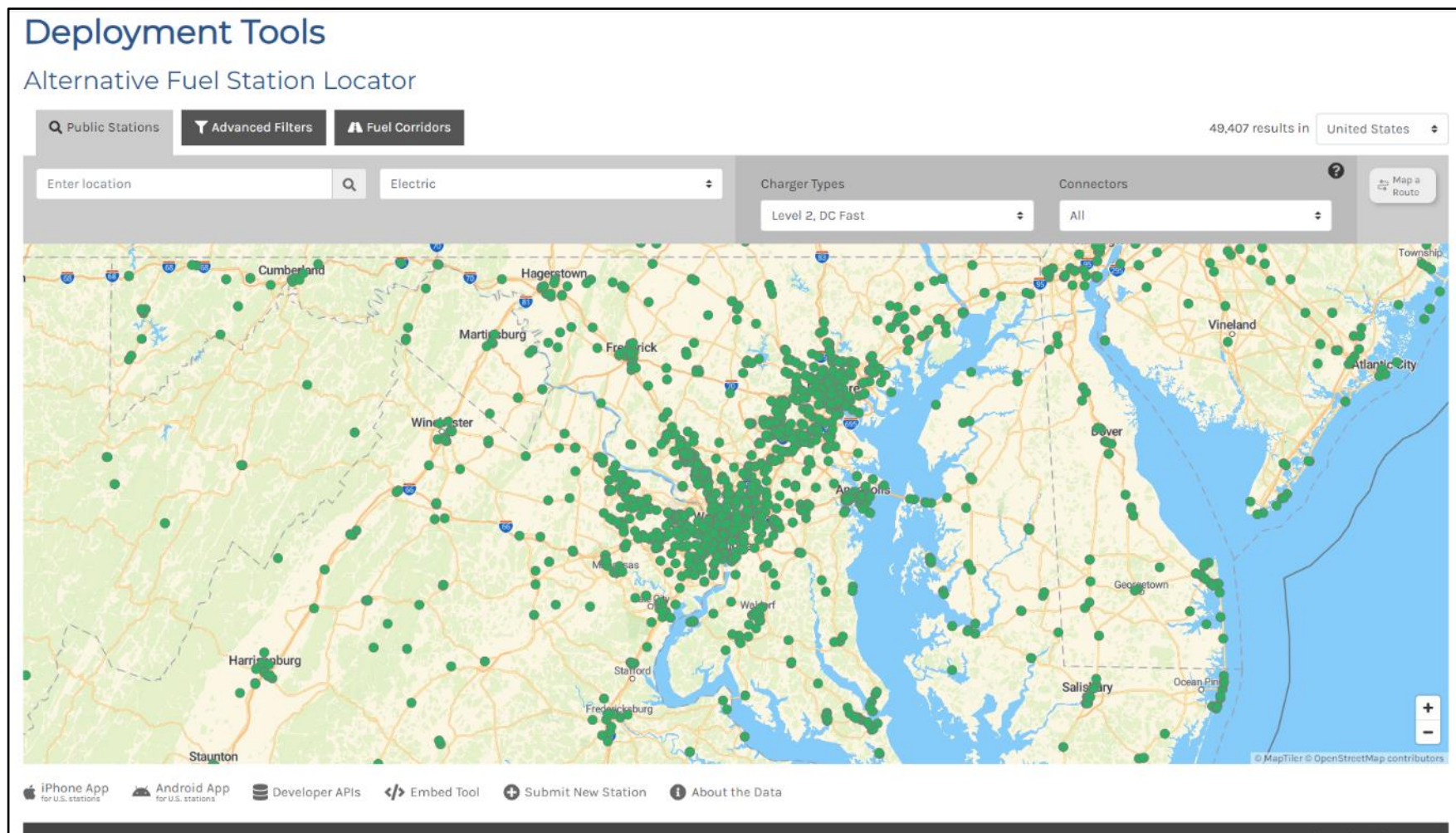
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- Seven local EV plans completed or in development:
  - City of Alexandria, City of Frederick, Prince George's County, Frederick County, City of Rockville, Arlington County, and the District of Columbia
- Number of interested jurisdictions to collaborate on regional plan
  - Assess anticipated number of EVs
  - Assess number of EV chargers needed to achieve goal (Level 2 and DCFC)
  - Identify priority locations for EV charging station deployment
  - Policy and best practice sharing

# Charging Network: DC Fast Charger Locations



# Charging Network: DCFC and Level 2 Charger Locations





# Siting Analysis – Demand Source Types

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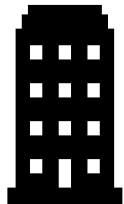


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## Residential

Identify the residential locations for the most likely EV adopters based on income, EV ownership, and dwelling type

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## Workplace

Make use of data from the travel model for home-based work trips

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## Opportunity

Covers a wide range of situations where an EV driver could potentially charge when away from home or work



# Parcel Prioritization – Proximity to:

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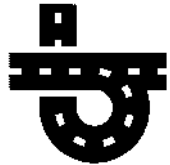
Existing charging locations (-)

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Multi-unit dwellings (+)

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Highway ramps (+)

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Disadvantaged Communities (+)

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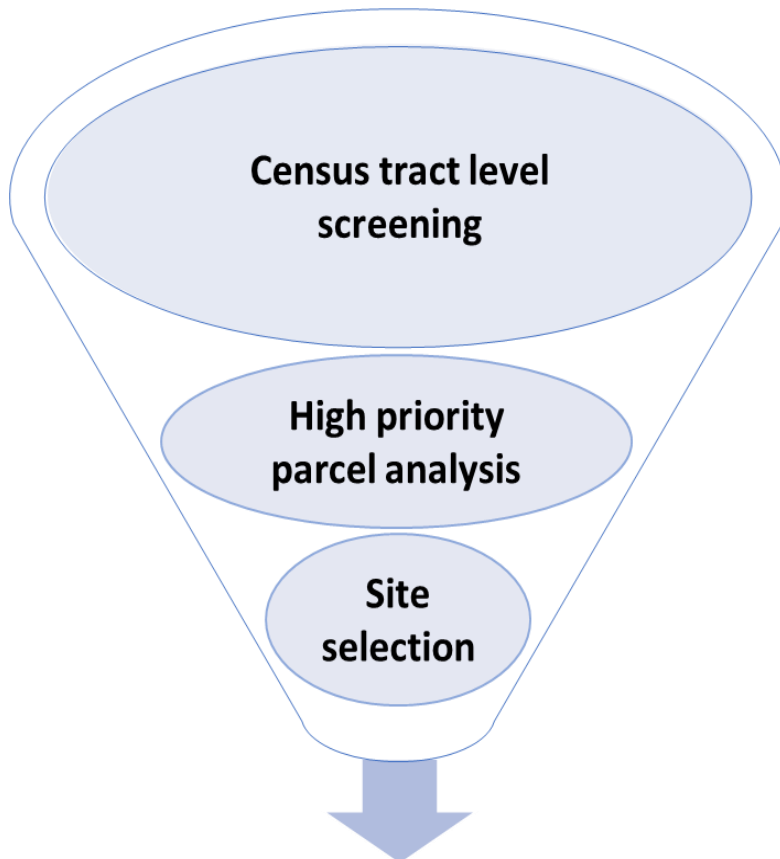
Public Transportation Stops (+)

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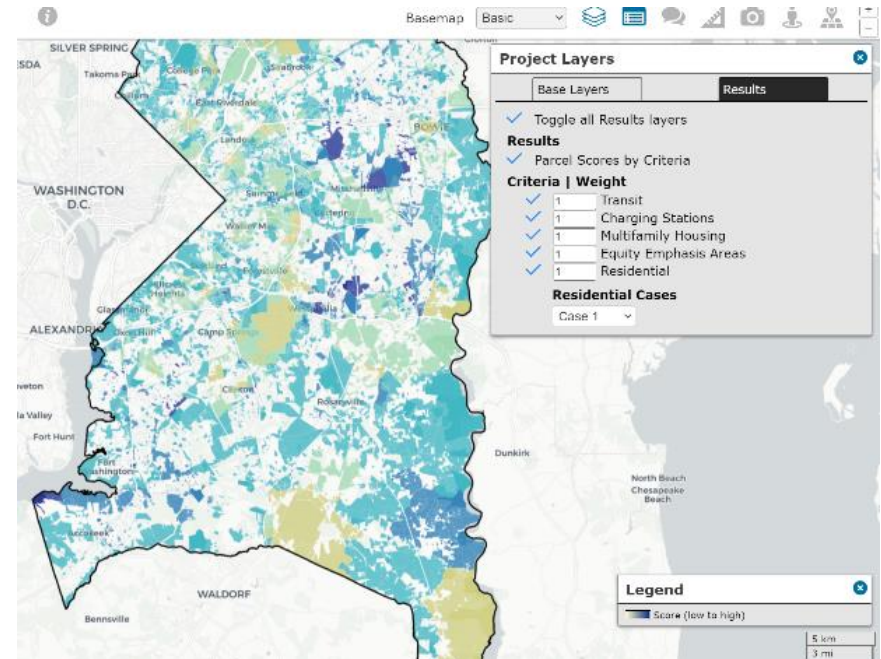


# EV Charging Deployment Zones Method

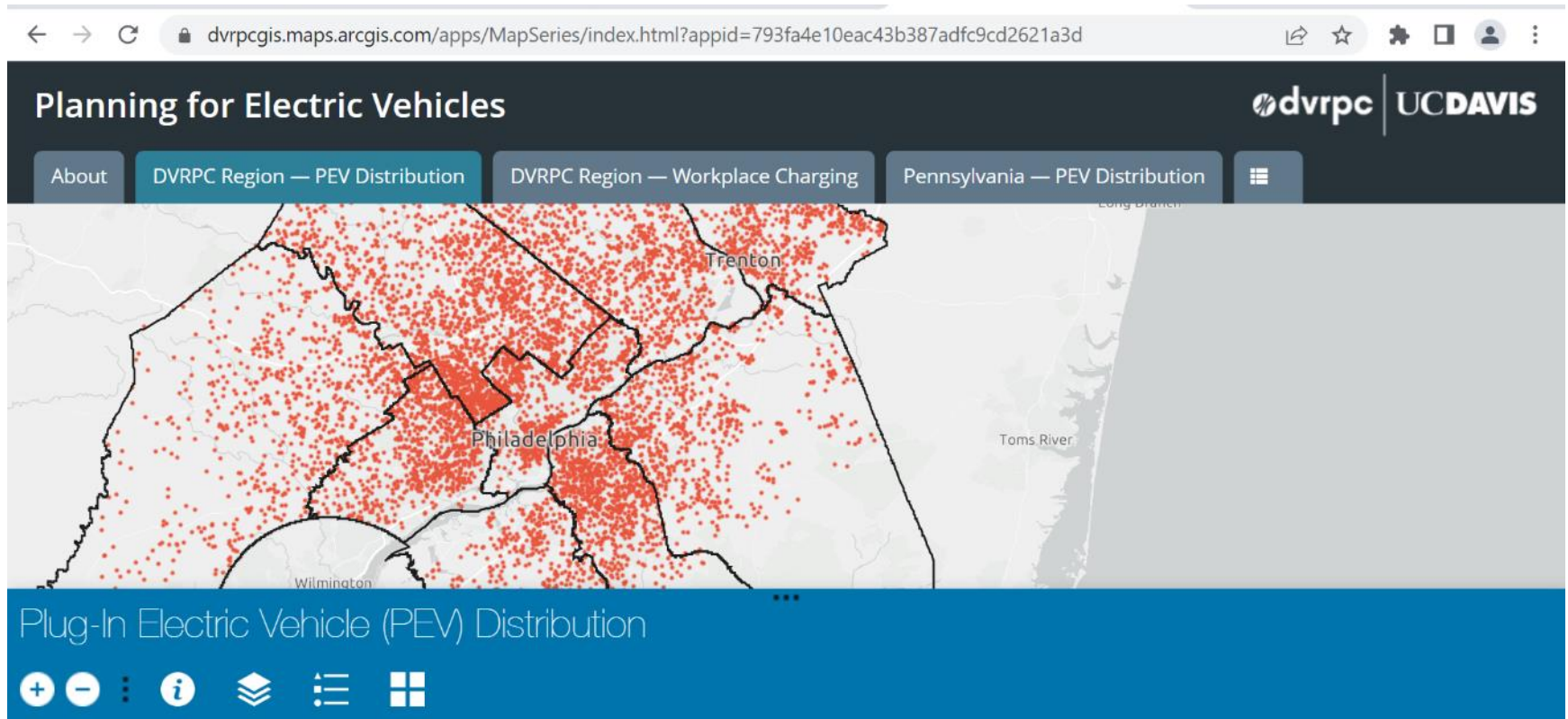


Recommended Charging Sites

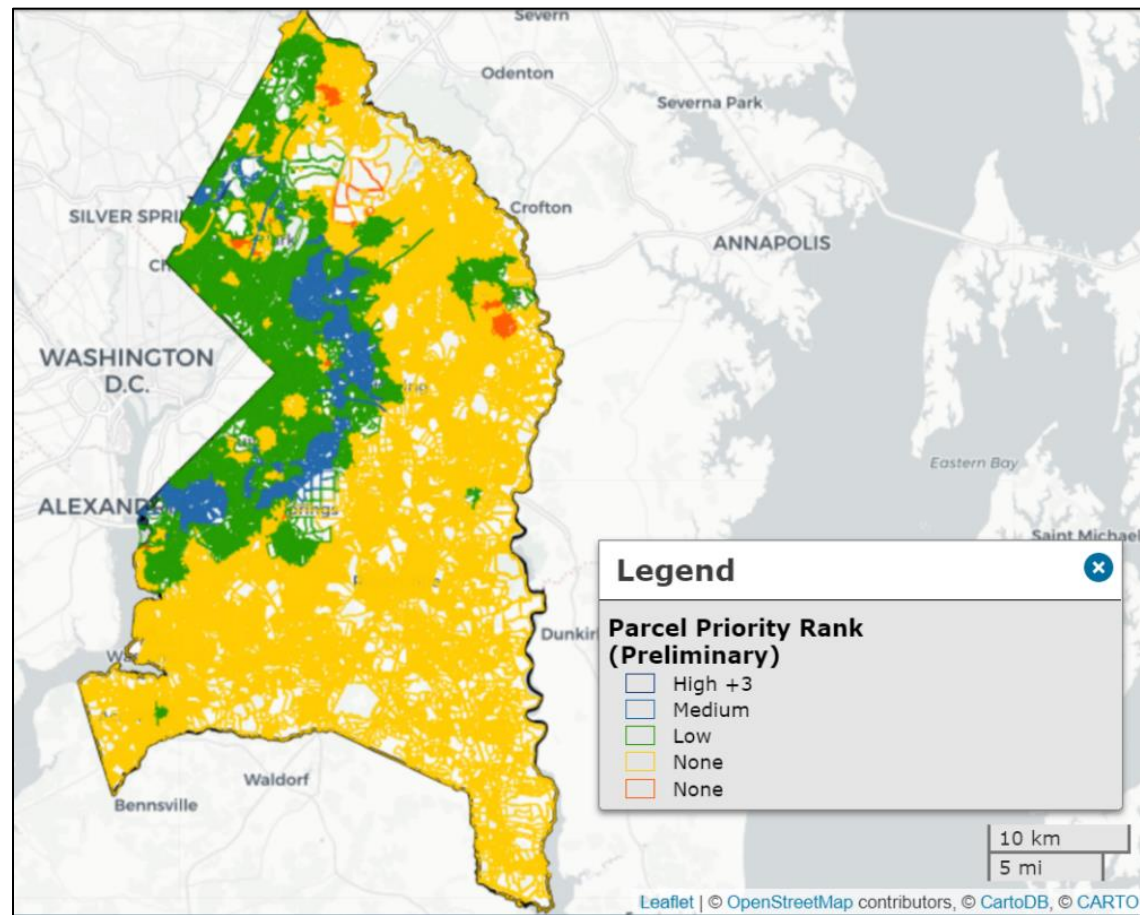
PGC EV Charging Demand



# DVRPC Experience and Mapping Tool

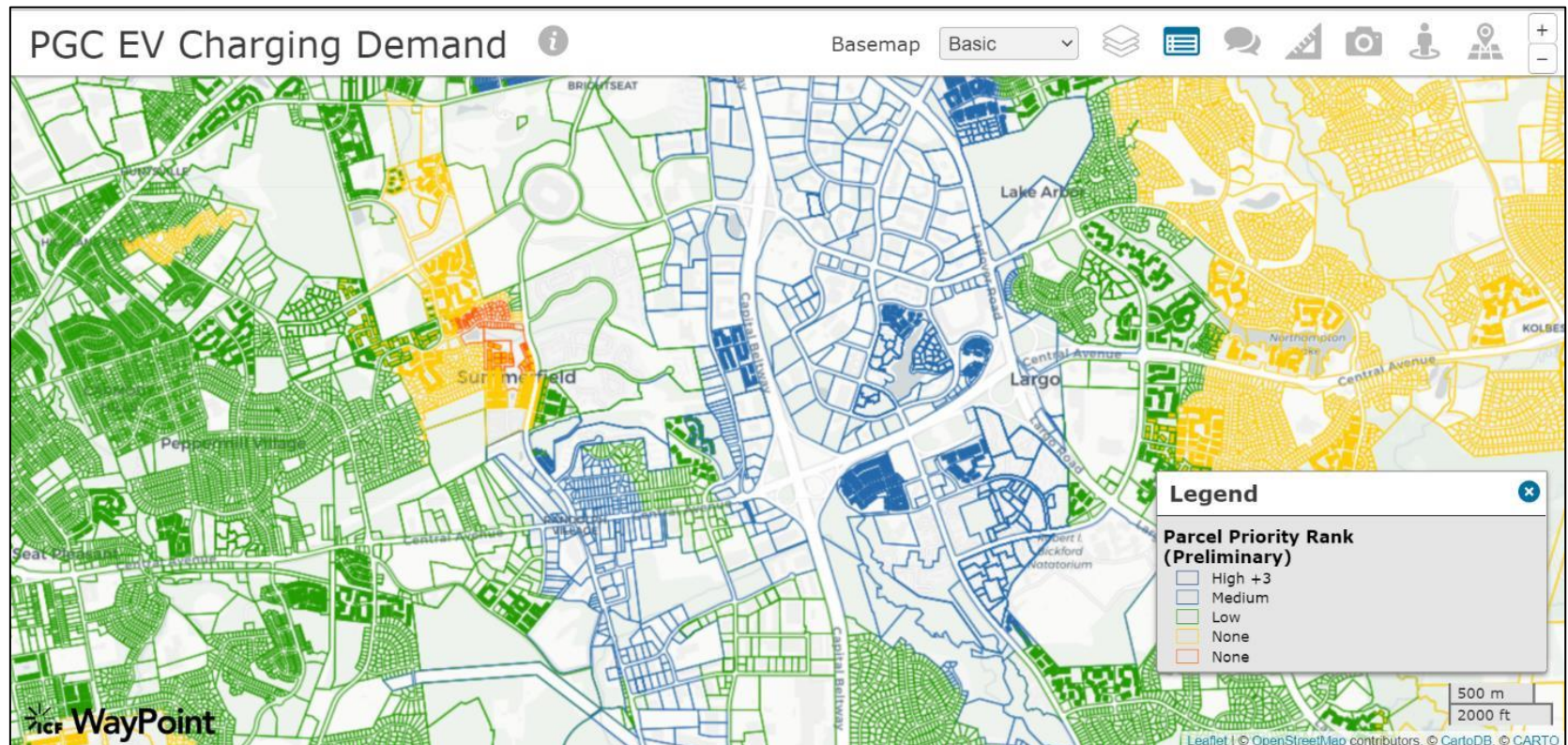


# Prince George's Priority Parcel Analysis - Preliminary Results

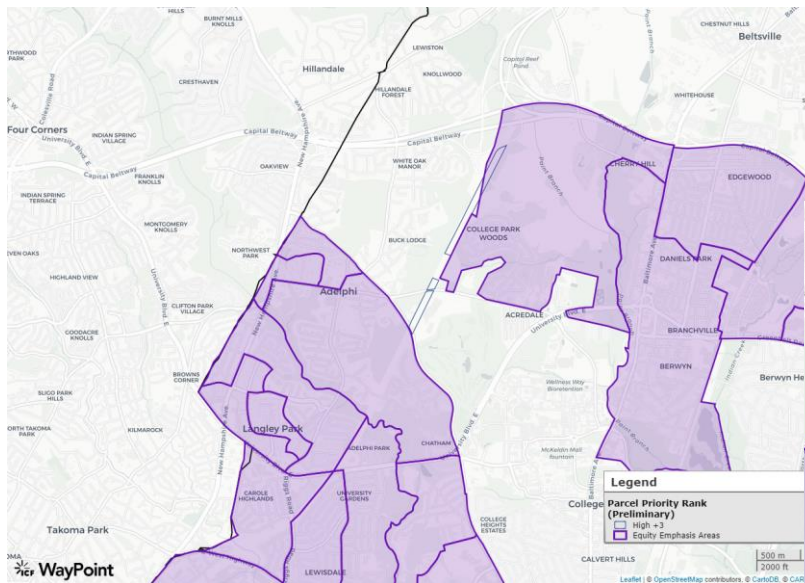




# Prince George's Priority Parcel Analysis - Preliminary Results

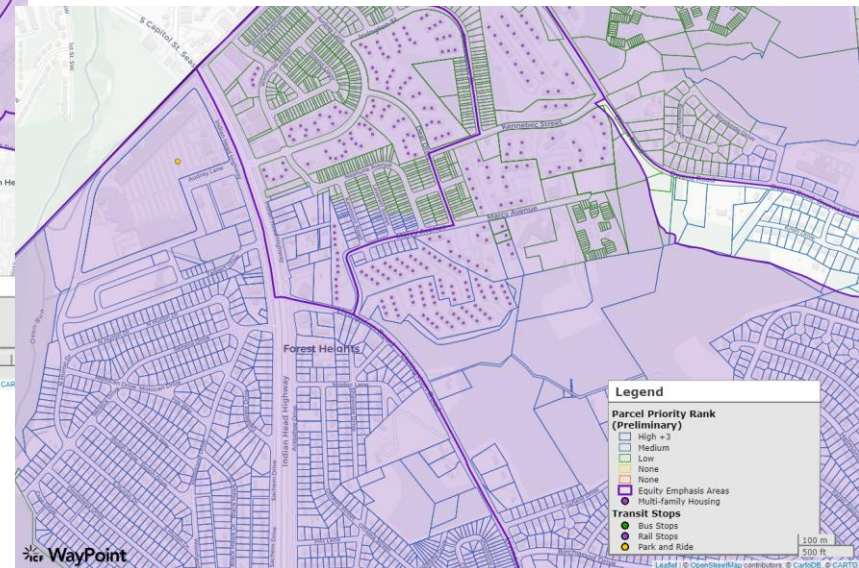


# Equity Emphasis, Multi-Family Housing, and Transit: GIS Overlays for Parcel Analysis



*Langley Park, Adelphi, University Blvd*

*South Capitol/Piscataway Hwy/Forest Heights*



# Regional EV Planning Coordination

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## Additional Areas of Interest

- Leading by example (e.g., government fleets, public facilities)
- Achieve best practice - zoning, permitting, siting
- Promote consumer adoption/EV purchasing cooperatives
- Support energy and building sector transitions
- Regulatory changes – FERC wholesale rates

# Opportunities





# Opportunity: NEVI Formula Grant Program

- Maryland NEVI Plan
- Virginia NEVI Plan
- DC NEVI Plan



**MARYLAND**   
**ZERO EMISSION**  
Vehicle Infrastructure Plan

## Virginia Electric Vehicle Infrastructure Deployment Plan

### District Electric Vehicle Infrastructure Deployment Plan



# Maryland NEVI Plan Examples

## EV Charging Infrastructure Deployment

The primary objective of the NEVI Formula Funds is to build out and certify Maryland's existing AFCs. Once certified, funding can be used to build out public charging infrastructure within communities.

### 1 | Build Out **ALL** Existing Corridors

### 2 | Obtain Certification

### 3 | Invest in Communities

#### BUILD OUT REQUIREMENTS

≤ 50 miles between one station/site and the next on corridor (minimum two stations)

≤ 1 mile from Interstate exits or highway intersections along the corridor

Include four Combined Charging System (CCS) connectors - Type 1 ports (Simultaneously charging four EVs)

Maximum charge power per DC ports should not be below 150 kW

Site power capability should be no less than 600 kW (support at least 150 kW per port simultaneously across four ports)

## FUNDING SOURCES

Maryland will be apportioned approximately \$63 million between FFY 2022- 2026, before any set-asides. These NEVI funds can be used by themselves or can be combined with funds from other eligible USDOT funding sources for EV charging infrastructure. In total, federal funds can cover up to 80 percent of eligible project costs.

The remaining cost share must be matched by private, state, or local funds. Matching funds will be largely covered through private funds from private entities with some possible state or local funding match available.



# Maryland NEVI Plan Examples

## DRAFT Maryland NEVI Funding Expectations

DRAFT NEVI Formula Funding Program Allocations by Maryland Fiscal Year [July 1 – June 30]							
Funding Category	2023 <sup>2</sup>	2024	2025	2026	2027	Total	% of Total
Planning and Staffing	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	<b>\$2,500,000</b>	4%
Installation <sup>1</sup>	\$4,250,000	\$16,250,000	\$11,500,000	\$11,500,000	\$11,500,000	<b>\$55,000,000</b>	96%
Total	\$4,750,000	\$16,750,000	\$12,000,000	\$12,000,000	\$12,000,000	<b>\$57,500,000<sup>3</sup></b>	

Source: MDOT EV Plan July 2022



# Maryland NEVI Plan Examples

Where do you think other charging would be best suited in rural and disadvantaged communities

Mentimeter



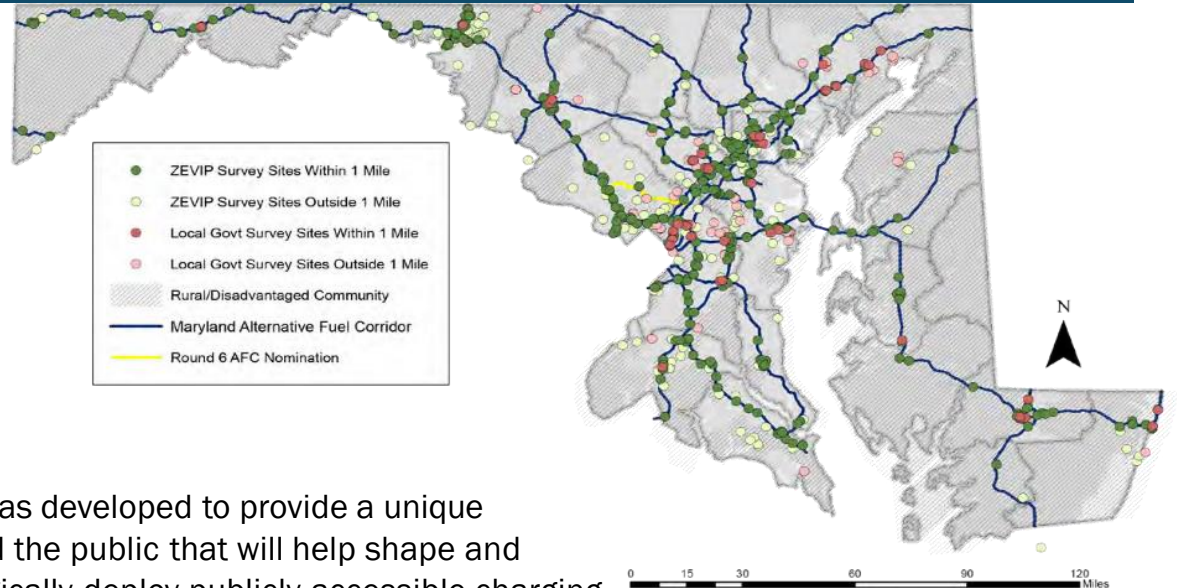
Source: MDOT EV Plan July 2022

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# Maryland NEVI Plan Examples

## OPTIMAL CHARGING LOCATIONS IDENTIFIED VIA METROQUEST SURVEYS



## METROQUEST SURVEY

A web based [MetroQuest Survey](#) was developed to provide a unique perspective from stakeholders and the public that will help shape and develop Maryland's plan to strategically deploy publicly accessible charging infrastructure. The survey launched on March 24, 2022 and consisted of rating the importance of ZEVIP vision and goals, identifying prioritization criteria, concerns, and AFCs for prioritization, as well as dropping pins on a map to help identify optimal locations for the EV charging stations. This survey built on previous MetroQuest surveys developed by MDOT, including the Local Government EV Survey, which identified challenges faced by local governments with installing charging stations as well as the location of optimal and planned charging station.

Source: MDOT EV Plan July 2022

# Maryland NEVI Plan Examples

## ZEVIP VISION STATEMENT

To continue leading the nation and strengthening our communities by providing equitable, reliable, and safe transportation electrification solutions. This vision statement applies to all activities that fall under the ZEVIP umbrella, including the NEVI Plan.



Source: MDOT EV Plan July 2022

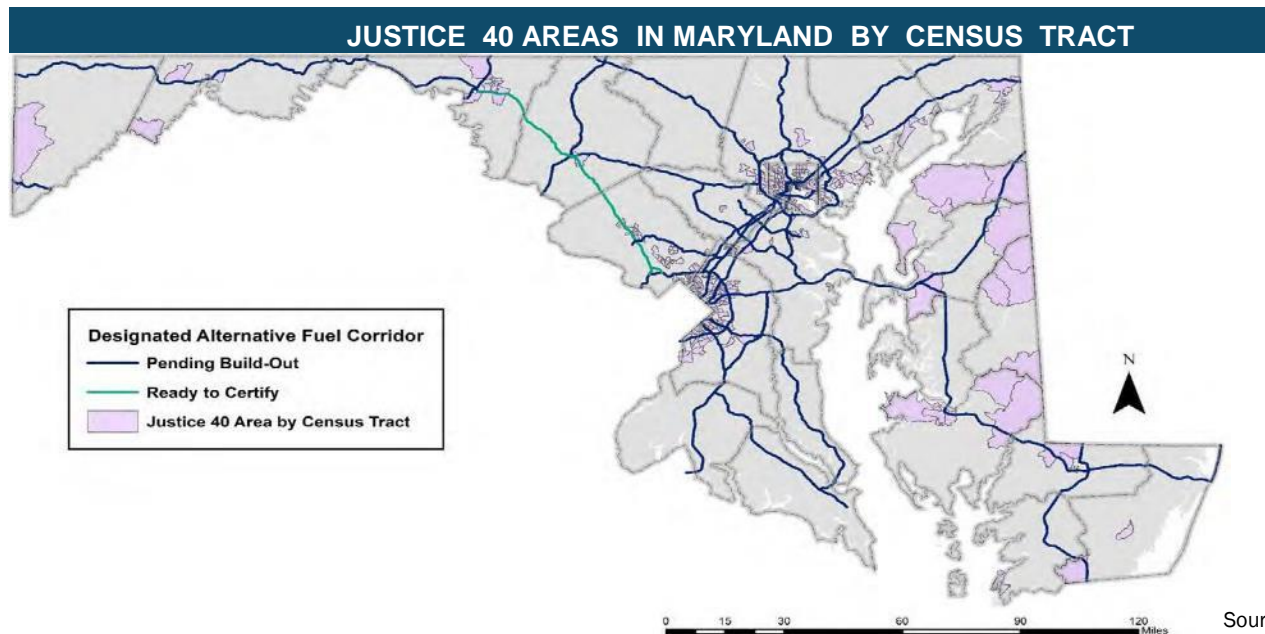


# Maryland NEVI Plan Examples

## IDENTIFICATION OF DISADVANTAGED COMMUNITIES (DACs) IN THE STATE

The USDOT and USDOE jointly developed an interim definition of DACs for the NEVI Formula Program that captured vulnerable populations, health, transportation access and burden, energy burden, fossil fuel dependence, resilience, and environmental and climate hazards. To help states identify these populations, USDOT developed the EV Charging Justice40 Map Tool.

For Maryland, census tracts with DACs are mainly concentrated within the Baltimore Beltway, primarily in Baltimore City, and within the Washington Beltway in Prince George's County. Census tracts with DACs were also identified in Frederick, Hagerstown, Cumberland, Frostburg, and along the Eastern Shore. No census tracts with DACs were identified in Southern Maryland.



Source: MDOT EV Plan July 2022

EV Infrastructure Planning  
July 30, 2022



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# Maryland NEVI Plan Examples

## EQUITY CONSIDERATIONS

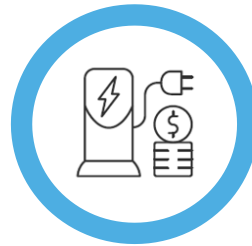
Maryland is committed to deploying an equitable and accessible charging network that ensures that at least 40 percent of all benefits from the NEVI Formula Program target DACs and rural communities that have been disproportionately burdened by the transportation and energy sectors. Based on input provided by stakeholders in the webinars, ZEEVIC meetings, and the MetroQuest Survey, MDOT, in consultation with MEA, identified the following principles that will guide the equitable deployment of charging infrastructure:



### ACCESSIBILITY

*Ensuring all Marylanders and Visitors Have Access to Reliable EV Charging*

- Geographic Diversity
  - Rural/Urban
- Corridors/Communities
- Multi-Lingual Graphic User Interfaces
  - ADA Compliance
- Multi-Unit Dwellings
- Employment Centers
- Safety While Charging
- Grid Reliability



### AFFORDABILITY

*Creating Incentives, Innovations, and Systems that Increase Affordability of EV Ownership and Charging*

- Leveraging state, local, federal, and private funding
- Cost of Vehicles
- Cost of Charging
- Mobility Hubs
- Carshare
- Rideshare
- ZEV Transit



### COMMUNICATION

*Meeting People where they are—Listening, and Educating*

- Multi-Lingual Materials
- Events
- Webinars
- Surveys and Polls
- Geofencing
- Website
- Social Media
- Calculators

Source: MDOT EV Plan July 2022



# Opportunity: Mid-Atlantic Electrification Partnership

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- Mid-Atlantic Electrification Partnership
- Utility Partnership
- EV Hubs
- Blink Charging



**Mid-Atlantic Electrification Partnership**



# Mid-Atlantic Electrification Partnership: Utilities

## BGE

- EV rideshare program, 20 DCFCs

## Pepco

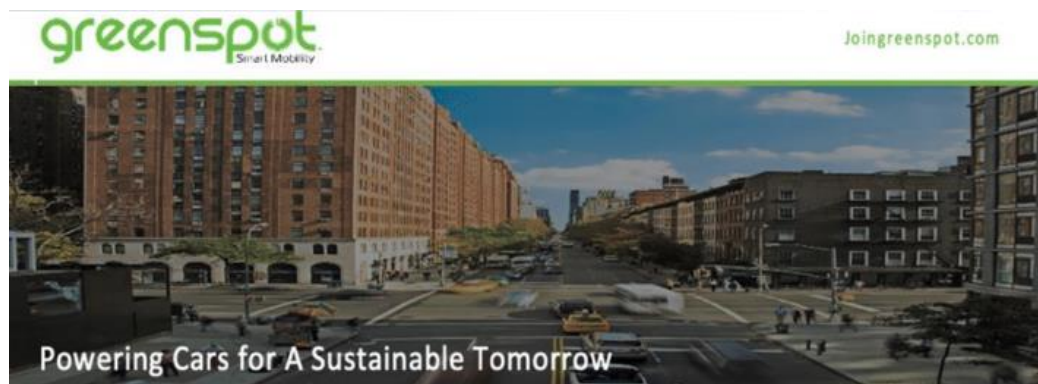
- Taxi program, 12 DCFCs



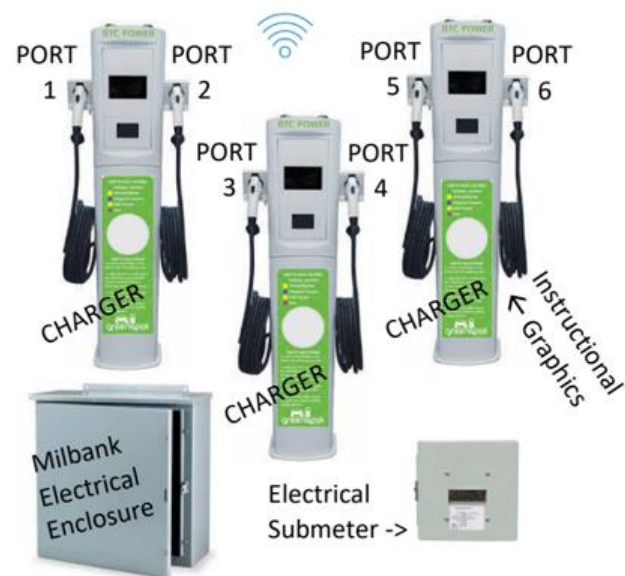
# Mid-Atlantic Electrification Partnership: Greenspot EV Hubs

- Municipal experience
- Highly visible stations

24 Hubs – 6 EVSE



## NETWORKED CHARGING HUB



# Mid-Atlantic Electrification Partnership: Blink Charging

## High-powered Level 2 chargers (19.2 kwh)

**The Mid-Atlantic Electrification Program and Blink are covering 100% of the cost to install electric vehicle chargers at your location!**

In partnership with MAEP, Blink will provide EV charging equipment to regional hosts for the deployment of Blink Level 2 EV charging stations to build-out the EV charging infrastructure.

- Blink provides the fastest Level 2 EV chargers at no cost
- Blink coordinates site preparation and charger installation
- Blink applies for grant funds
- Blink reimburses for the cost of electricity
- Host location receives 50% net revenue
- Blink will provide EV charger operations and maintenance

### Qualifying States



Virginia



West Virginia



Maryland



Washington D.C.



# Mid-Atlantic Electrification Partnership: Project Contacts

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## Maryland

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# Opportunity: Utility Programs

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## Maryland

Public Charging Programs through Delmarva, Pepco, Potomac Edison, and SMECO. These utilities offer to install and operate Level 2 and/or DCFC stations on government properties at no cost to the government site.

## DC

Public EV Charging Station Make-Ready Support through Pepco

## Virginia

EV Charging Station Rebates for Transit through Dominion Energy



# Opportunity: State Programs

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## Maryland Energy Administration's Clean Fuels Technical Assistance (CFTA) Program

The CFTA Program aims to provide eligible local government and municipal fleets (including schools) with free technical assistance as they consider alternative transportation fuel options. Applications will be accepted through **August 31, 2022**.

## Maryland Energy Administration's EVSE Rebate Program

MEA offers rebates of up to \$4,000 to state and local governments (as well as businesses and non-profit organizations) for the purchase and installation of Level 2 EVSE. The fiscal year 2023 application period is open until **June 30, 2023**.

# Opportunity: Joint Office Community Infrastructure Grants

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- Charging and Fueling Infrastructure Grant Program
- \$2.5 billion over 5 years
- 80% Federal, 20% Cost Share Match
- Anticipated release Winter 2022
- Consider regional application



Joint Office of  
**Energy and  
Transportation**



Metropolitan Washington  
Council of Governments

# Discussion and Direction



# Regional Coordination of EV Planning

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## Proposed Three Areas of Focus

1. Move toward Comprehensive Regional EV Plan
2. Serve as a data clearinghouse for local plan data
3. Consider coordinated regional application for grant funding

# Questions for Discussion

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## *Thoughts on local needs and next steps*

- Identify needs and priorities for charging sites
- Funding for 20% match
- Local and regional fiscal and staff resources
- Key components:
  - Site locations for project proposals
  - ID number, type, and locations
  - Community partners
  - Street and community design considerations
  - Actionable best practice recommendations

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