ACCELERATING ACTION ON ELECTRIC VEHICLE (EV) DEPLOYMENT: REGIONAL EV INFRASTRUCTURE PLANNING

Metropolitan Washington Council of Governments (COG)
Region Forward Coalition (RFC)

Jeff King
COG Director, Climate, Energy and Air Programs

October 28, 2022

Metropolitan Washington
Council of Governments

Agenda

1. Update on Local and Regional Activities
   a) Follow up from September COG Board Meeting
2. Overview of Opportunities
3. Discussion and Direction

Why Electric Vehicles

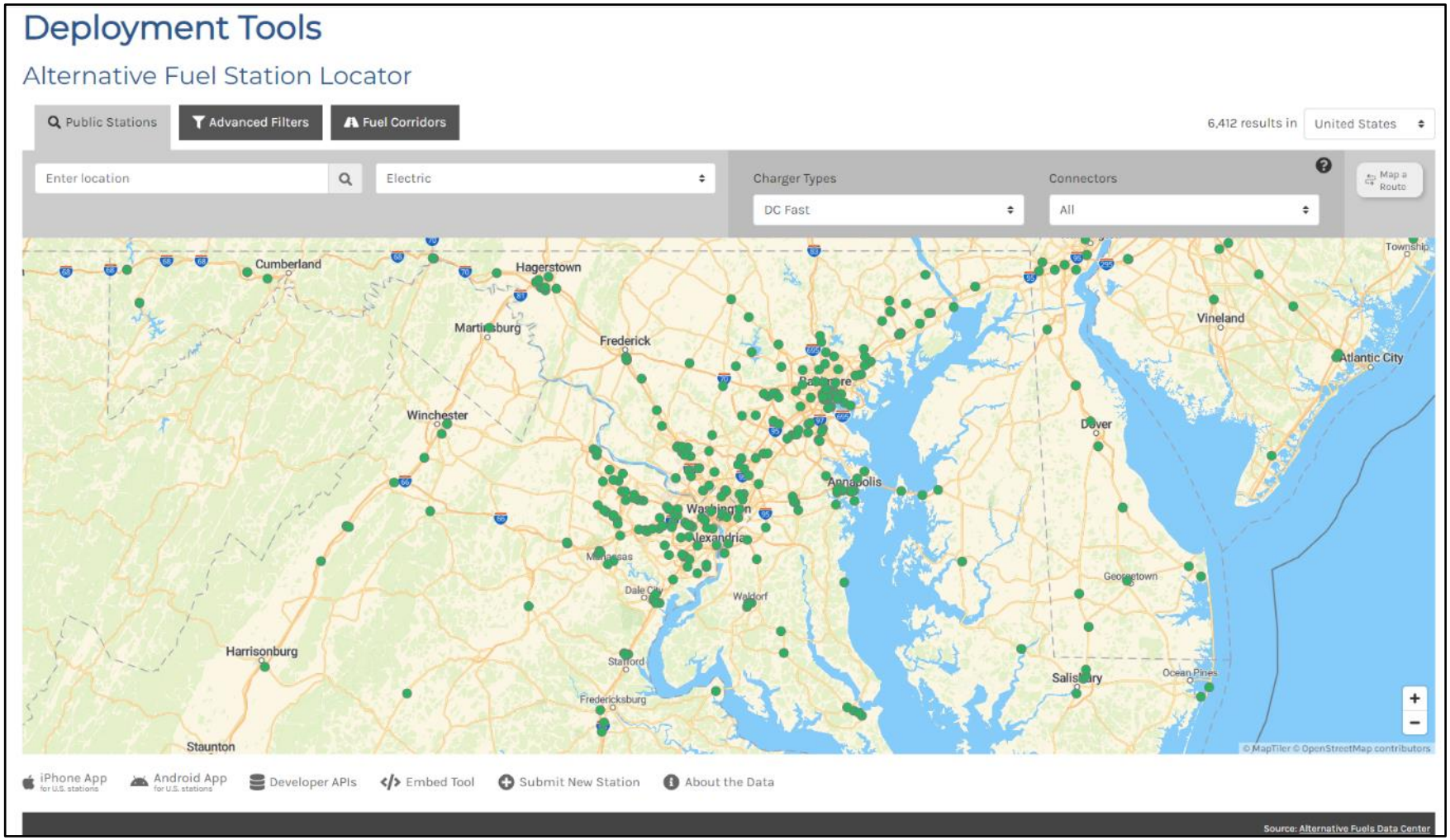
1. Regional GHG Reduction Goal
   - ✓ 50%  by 2030
2. EVs identified as leading measure to reduce emissions.
3. Significant new federal funding to assist with infrastructure deployment.
4. Strong interest in regional Coordination.

Local and Regional Activities Update

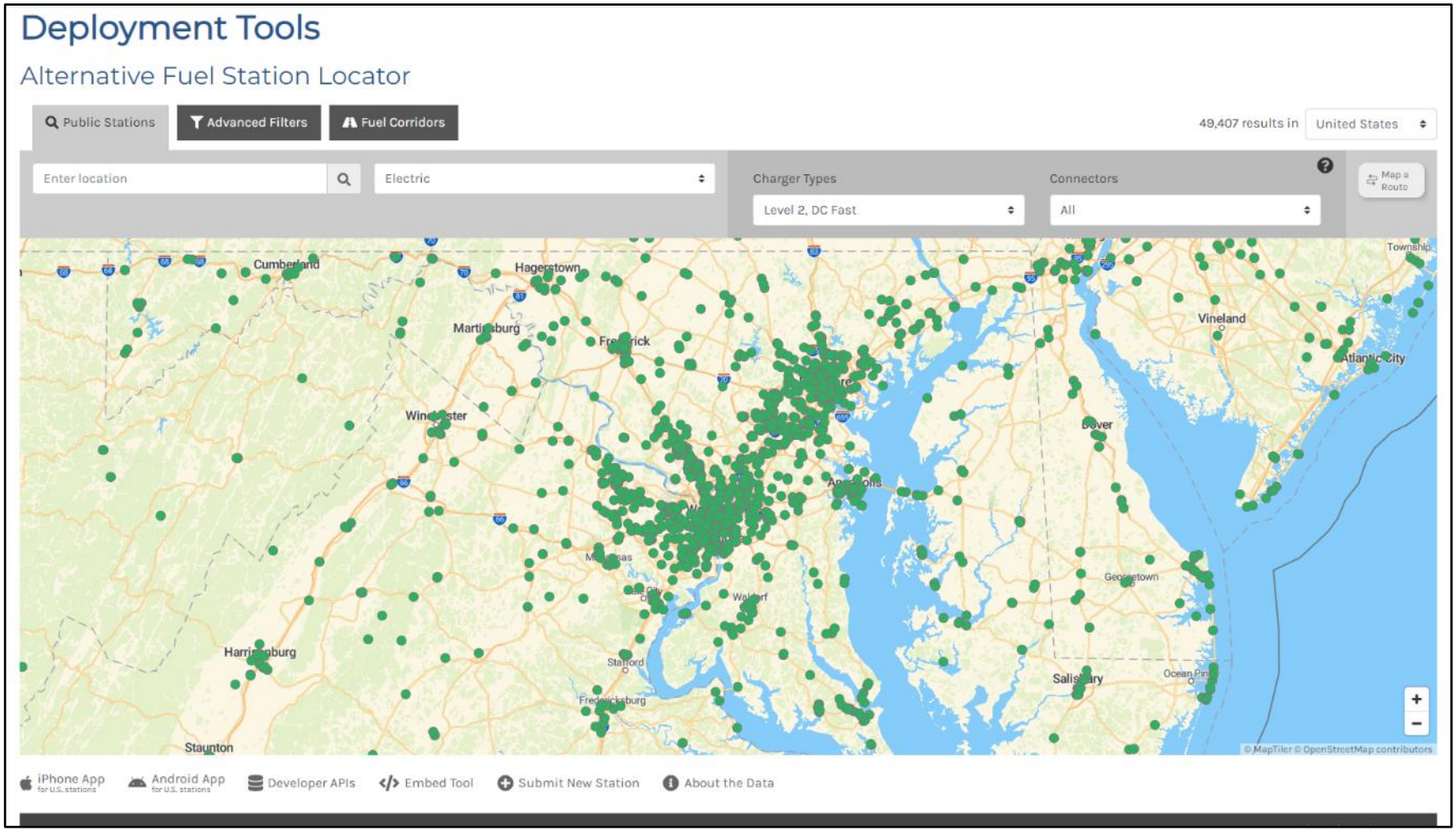
MWCOG Current EV Activities

- Six 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



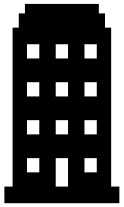
Charging Network: DCFC and Level 2 Charger Locations



Siting Analysis – Demand Source Types

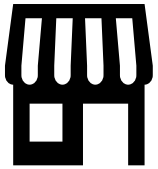
Residential

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



Workplace

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



Opportunity

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

Parcel Prioritization – Proximity to:

Existing charging locations (-)

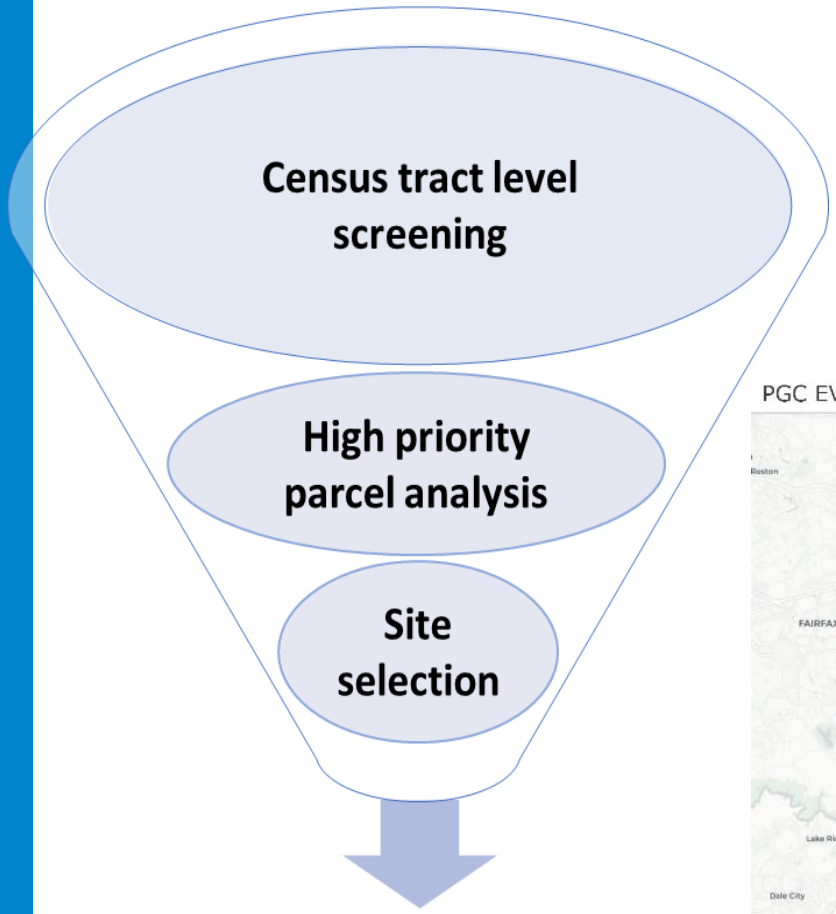
Multi-unit dwellings (+)

Highway ramps (+)

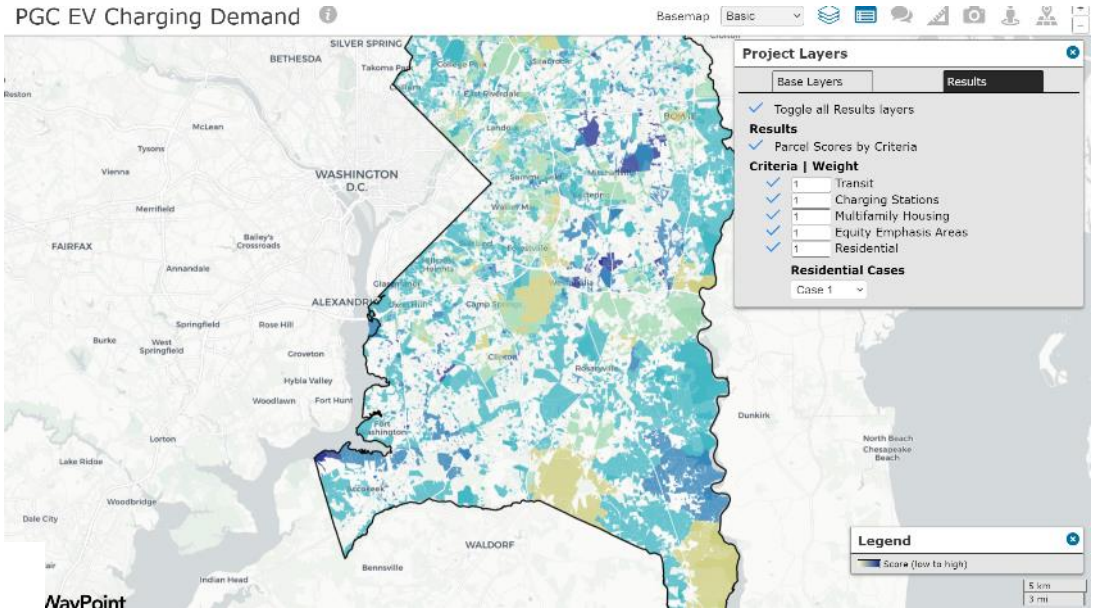
Disadvantaged Communities (+)

Public Transportation Stops (+)

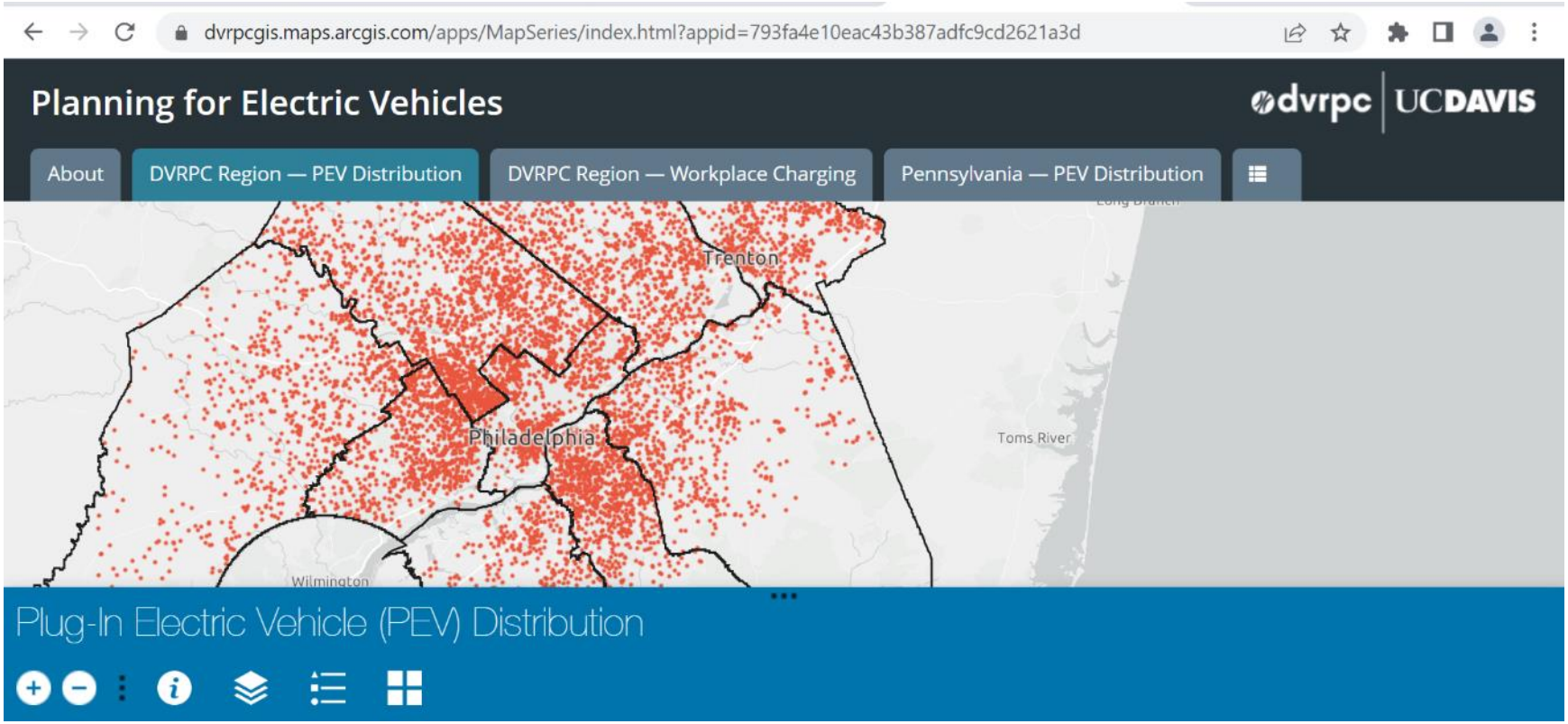
EV Charging Deployment Zones Method



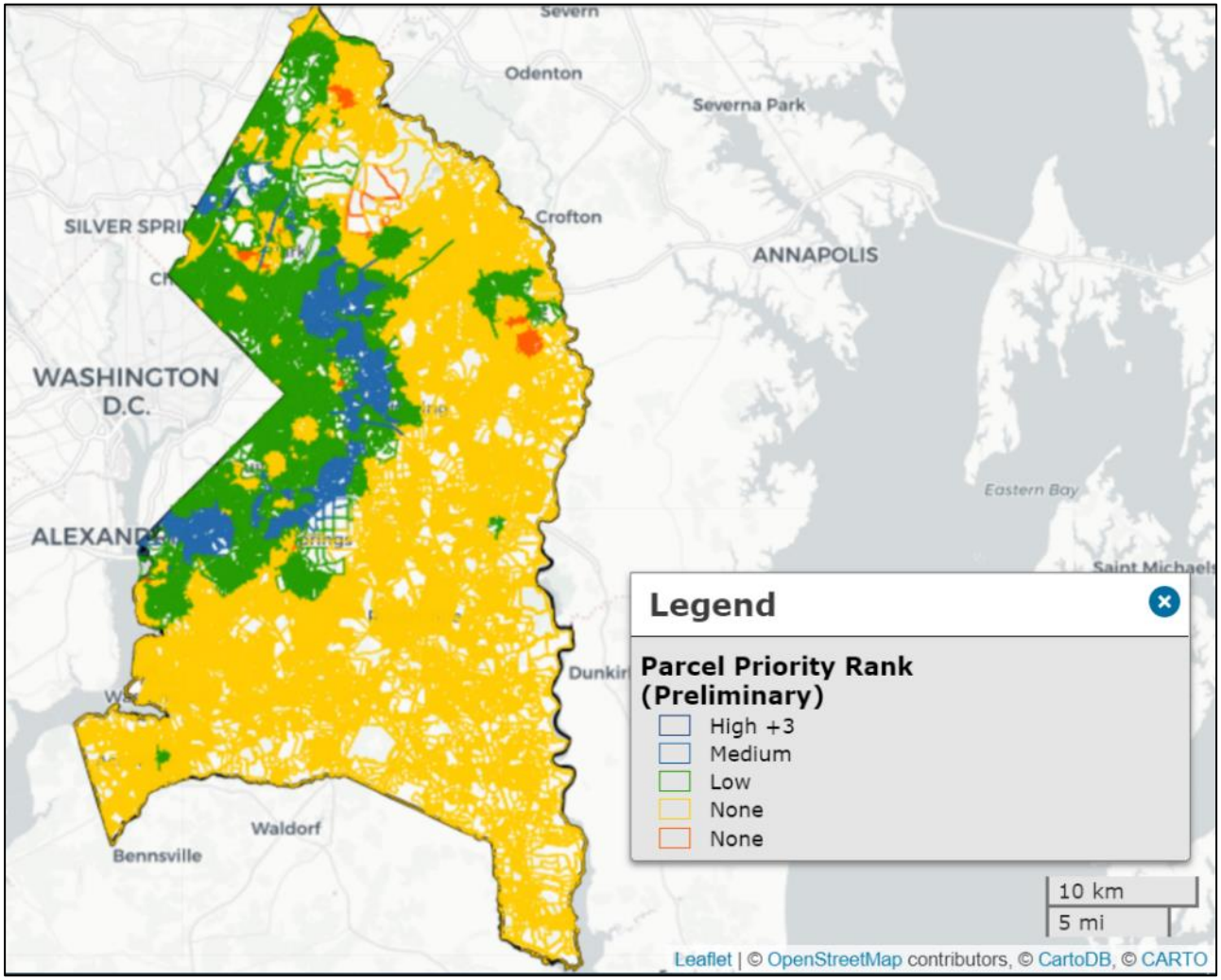
Recommended Charging Sites



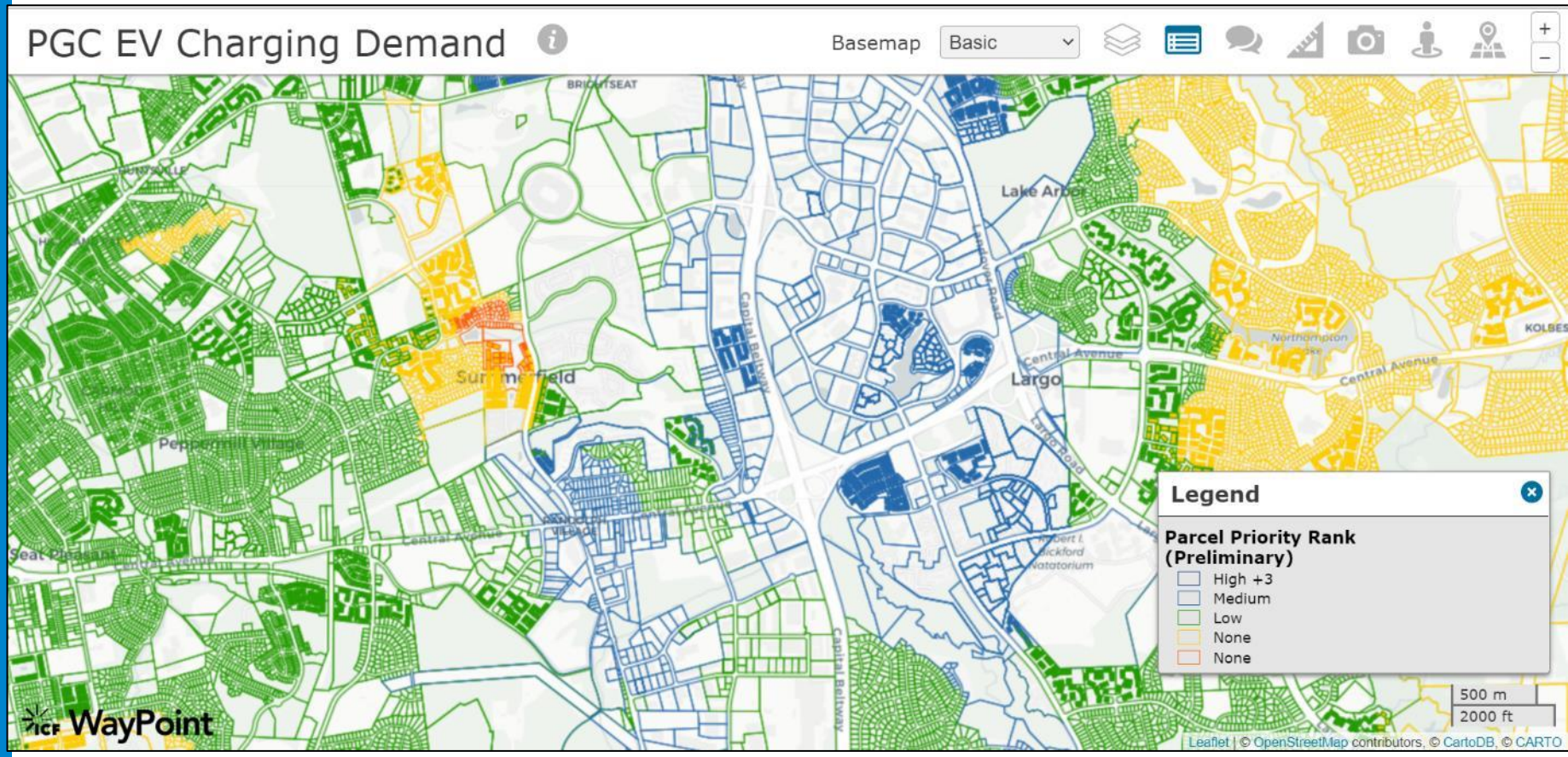
DVRPC Experience and Mapping Tool



Prince George's Priority Parcel Analysis - Preliminary Results



Prince George's Priority Parcel Analysis - Preliminary Results



Regional EV Planning Coordination

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

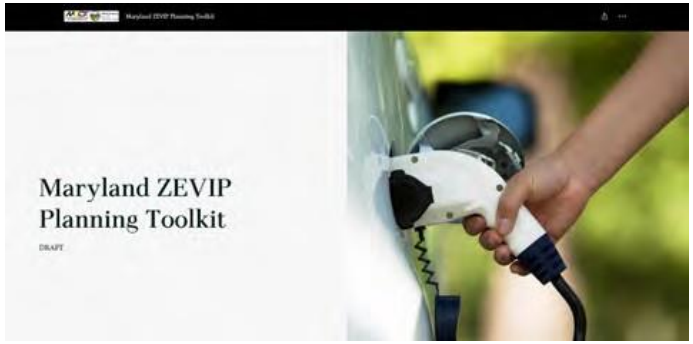
Opportunity: NEVI Formula Grant Program

- 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.

Source: MDOT EV Plan July 2022

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**[2]	**2024**	**2025**	**2026**	**2027**	**Total**	**% of Total**
Planning and Staffing	$500,000	$500,000	$500,000	$500,000	$500,000	**$2,500,000**	4%
Installation[1]	$4,250,000	$16,250,000	$11,500,000	$11,500,000	$11,500,000	**$55,000,000**	96%
Total	$4,750,000	$16,750,000	$12,000,000	$12,000,000	$12,000,000	**$57,500,000**[3]	

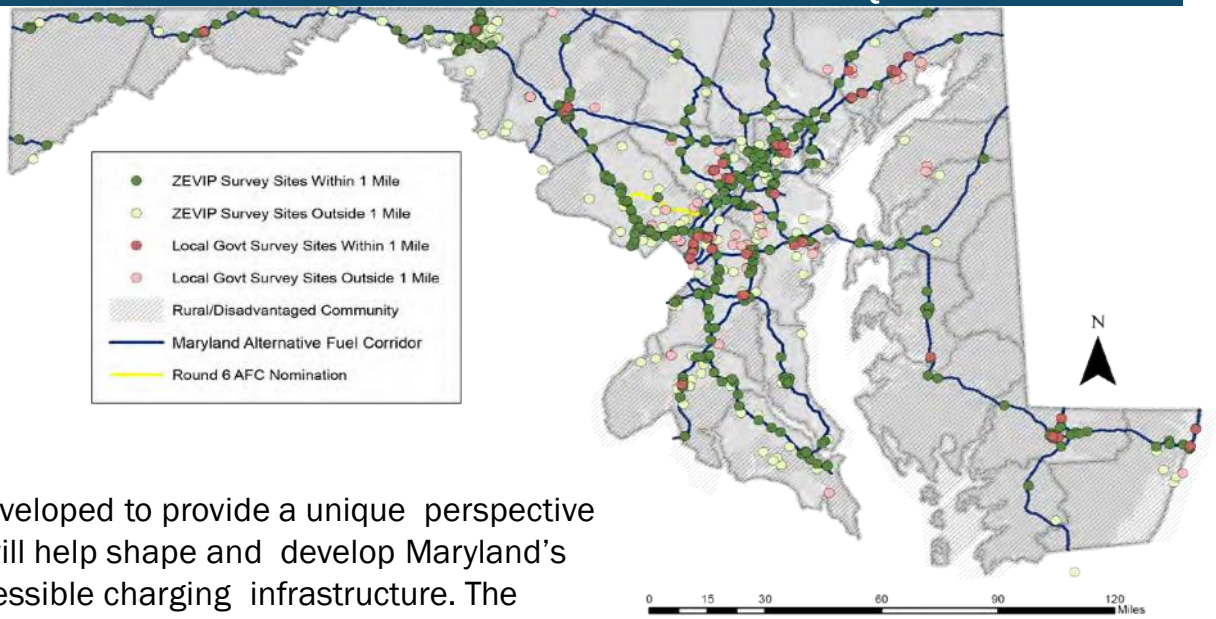
Source: MDOT EV Plan July 2022

Maryland NEVI Plan Examples

Source: MDOT EV Plan July 2022

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.

NEVI GOALS

Alternative Fuel Corridors
Certify existing (23) corridors within five years and identify future roadways

Build & Strengthen Public-Private Partnerships
Facilitate contracting and implementation

Equitable Charging Infrastructure
Prioritize disadvantaged and rural communities

Collaboration
Work with state, local, regional, non-government organizations (NGOs), and public organizations and plans

Workforce/Job Impacts
Providing training
Enhance experience-level, and diversity

Resiliency and Reliability
Understand and address grid impacts, renewables, emergency preparedness, weather, operations/maintenance

Geographic and Location Diversity
Meet demands in various locations - Urban, suburban, rural, employment centers, multi-unit dwellings, etc.

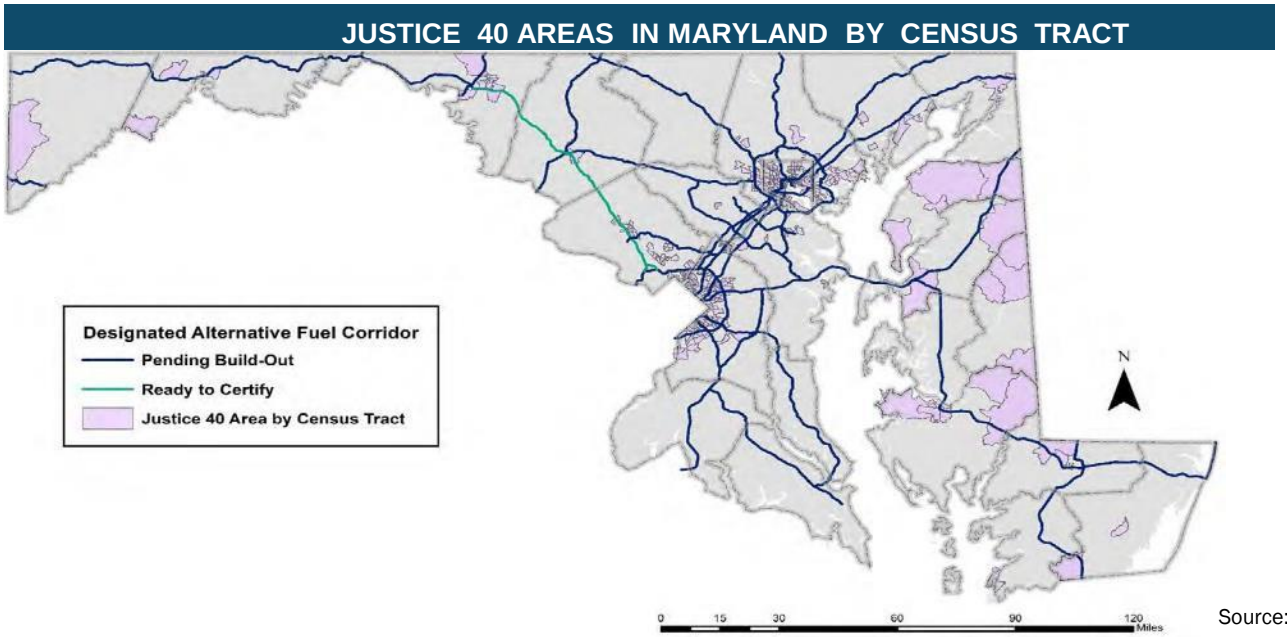
Source: MDOT EV Plan July 2022

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

Maryland NEVI Plan Examples

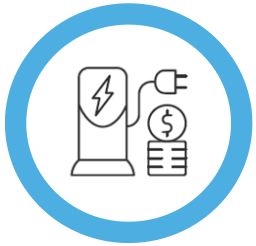
EQUITY CONSIDERATIONS

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

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

Mid-Atlantic Electrification Partnership: Utilities

BGE

- EV rideshare program, 20 DCFCs

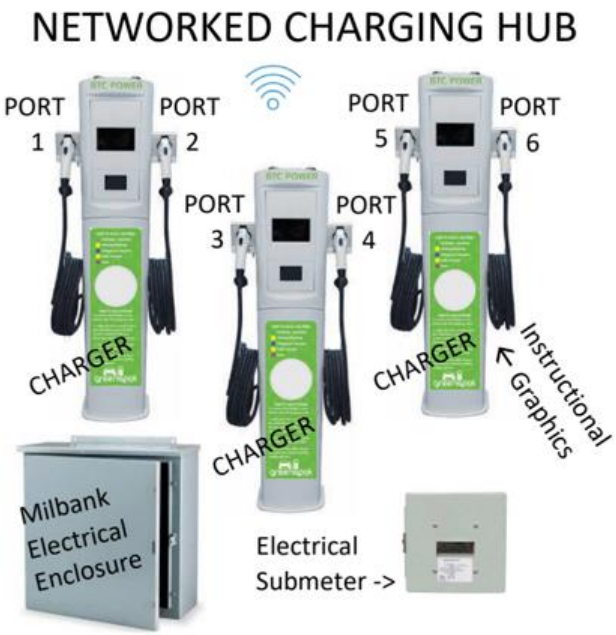
Pepco

- Taxi program, 12 DCFCs

Mid-Atlantic Electrification Partnership: Greenspot EV Hubs

- Municipal experience
- Highly visible stations

24 Hubs – 6 EVSE



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

Mid-Atlantic Electrification Partnership: Project Contacts

Virginia
Alleyn Harned
aharned@vacleancities.org

DC
Antoine Thompson
antoinethompson@gwrccc.org

Maryland
Mike Jones
mike.jones@maryland.gov

Opportunity: Utility Programs

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

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

- 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

Regional EV Planning

COG Board Resolution

RESOLUTION ENDORSING EFFORTS TO SUPPORT ELECTRIC VEHICLE DEPLOYMENT

1. Serve as information clearinghouse
2. Convene Regional EV Infrastructure Working Group
3. Examine deal structure, finance, partnerships
4. Help coordinate grant applications

https://www.mwcog.org/documents/2022/09/14/certified-resolution-r40-2022---endorsing-efforts-to-support-electric-vehicle-deployment/

Questions for Discussion

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

Contact Information

Jeff King

COG Director, Climate, Energy and Air Program
(202) 962-3238
jking@mwcog.org