

Maryland Department of Transportation

National Electric Vehicle Infrastructure Program (NEVI)



Power 2Go Symposium

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February 13, 2023

National Electric Vehicle Infrastructure Program (NEVI)

- NEVI Formula Funding Program
- MDOT's NEVI Plan
- EV Registrations in Maryland
- Alternative Fuel Corridors (AFCs)
- Charging Locations in Maryland
- Charging Networks
- Addressing Equity
- NEVI Toolkit
- Maryland EVs and ZEVs
- IRA Tax Incentives
- Multi-State Agreements

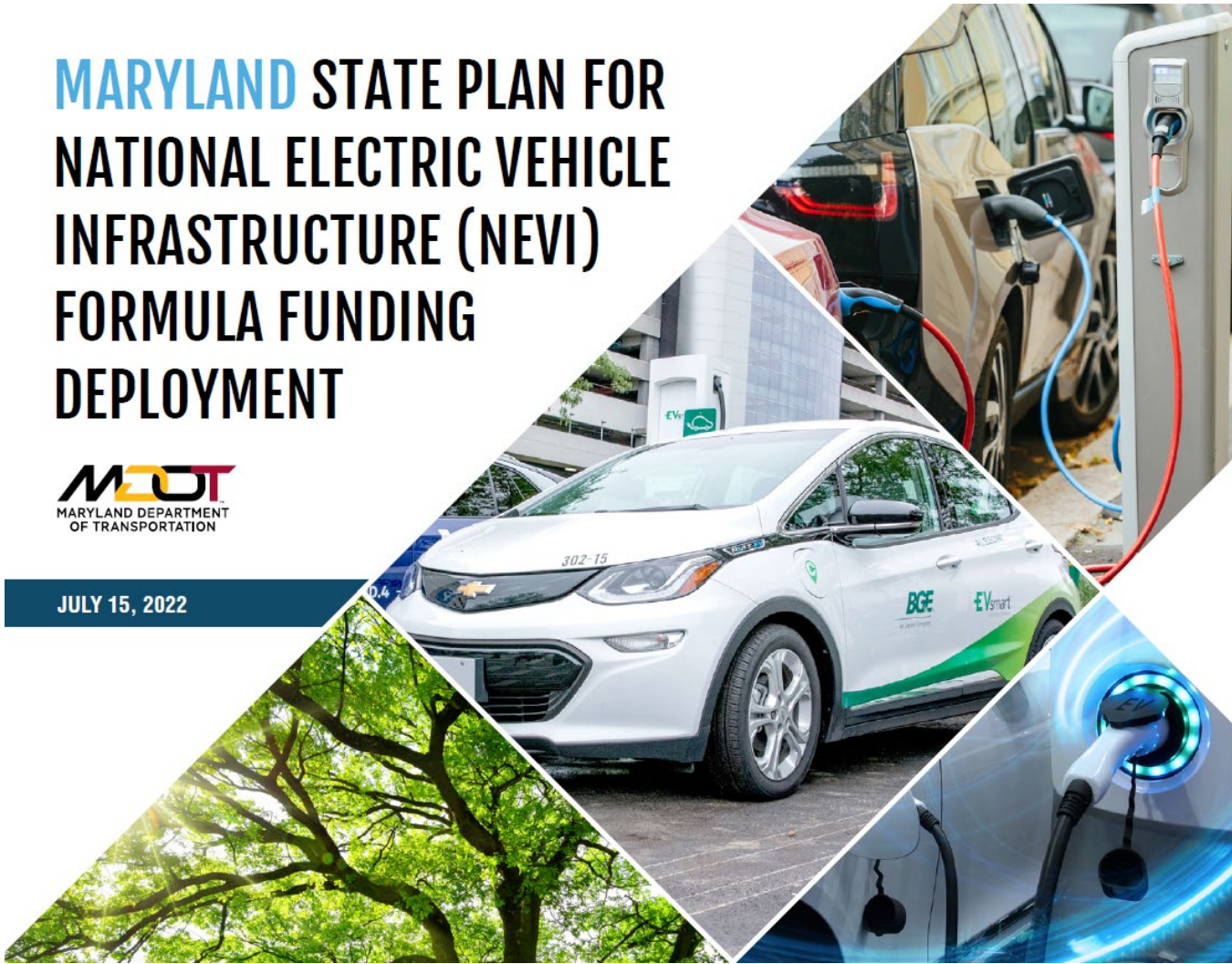


NEVI BACKGROUND

MARYLAND STATE PLAN FOR NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI) FORMULA FUNDING DEPLOYMENT



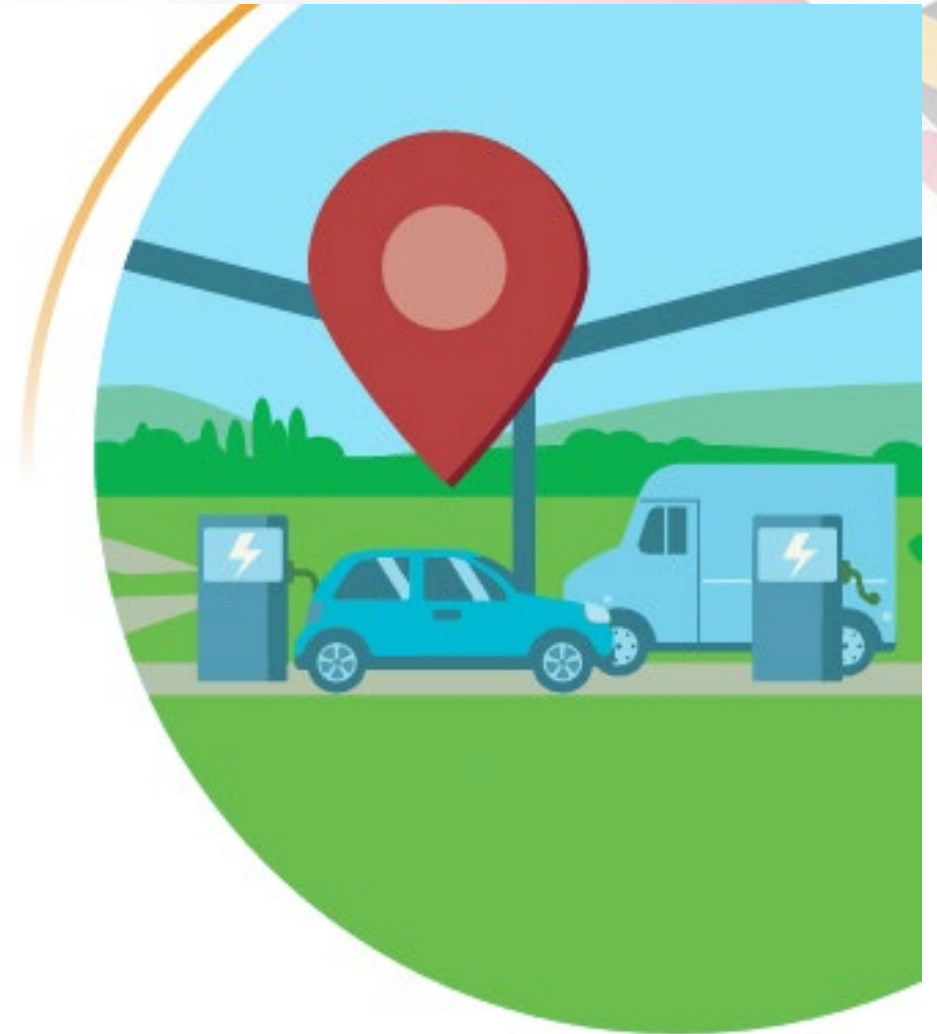
JULY 15, 2022



- All states submitted plans to the Joint Office August 1, 2022 (MD was one of the **first**)
- **\$57,500,000** for investment in Maryland (after set-asides)
- **Maryland Goals:**
 1. Certify Corridors
 2. Invest in Communities per **ZEEVIC**

NEVI Formula Funding Program

- \$60M for Maryland
- National Goal 500,000 charging stations
 - *4 DC fast chargers every 50 miles*
 - *Within 1 mile of Alternative Fuel Corridor*
- Nationwide \$2.5 billion in discretionary grants through other programs:
 - 50% Alternative Fuel Corridor Charging grants
 - 50% Other Community Charging grants



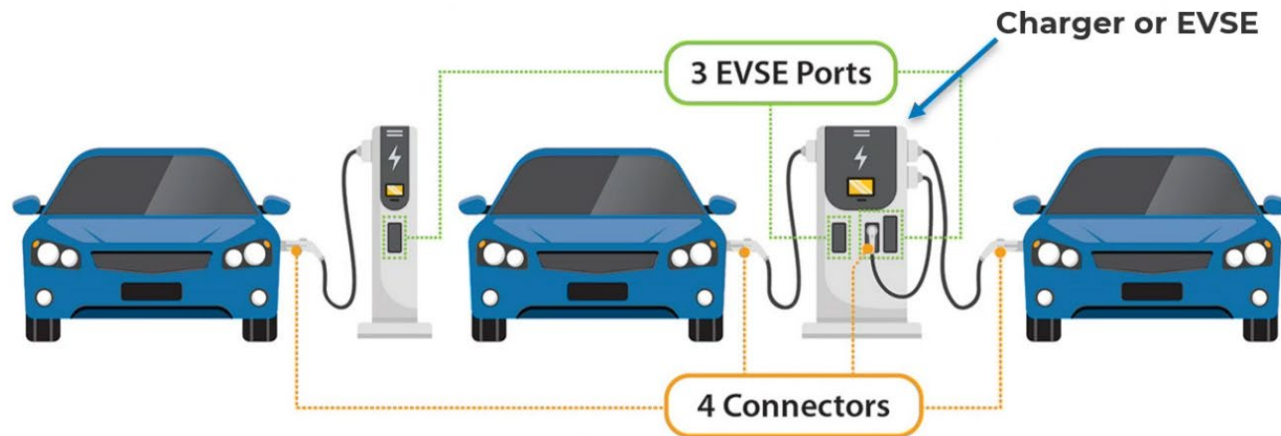
Proposed Rulemaking

§ 680.104 Definitions

Charging network provider operates the digital communication network that remotely manages the chargers.

Charging station operator operates and maintains the chargers and supporting equipment and facilities at one or more charging stations.

Charging Station



The FHWA proposes to establish regulations that would set these minimum standards and requirements for projects funded under the NEVI Formula Program and projects for the construction of publicly accessible EV chargers funded under title 23, United States Code.

ted from https://afdc.energy.gov/fuels/electricity_infrastructure.html

Proposed Rulemaking

NPRM proposes minimum standards and requirements for projects funded under the NEVI Formula Program. The standards and requirements proposed would apply to:

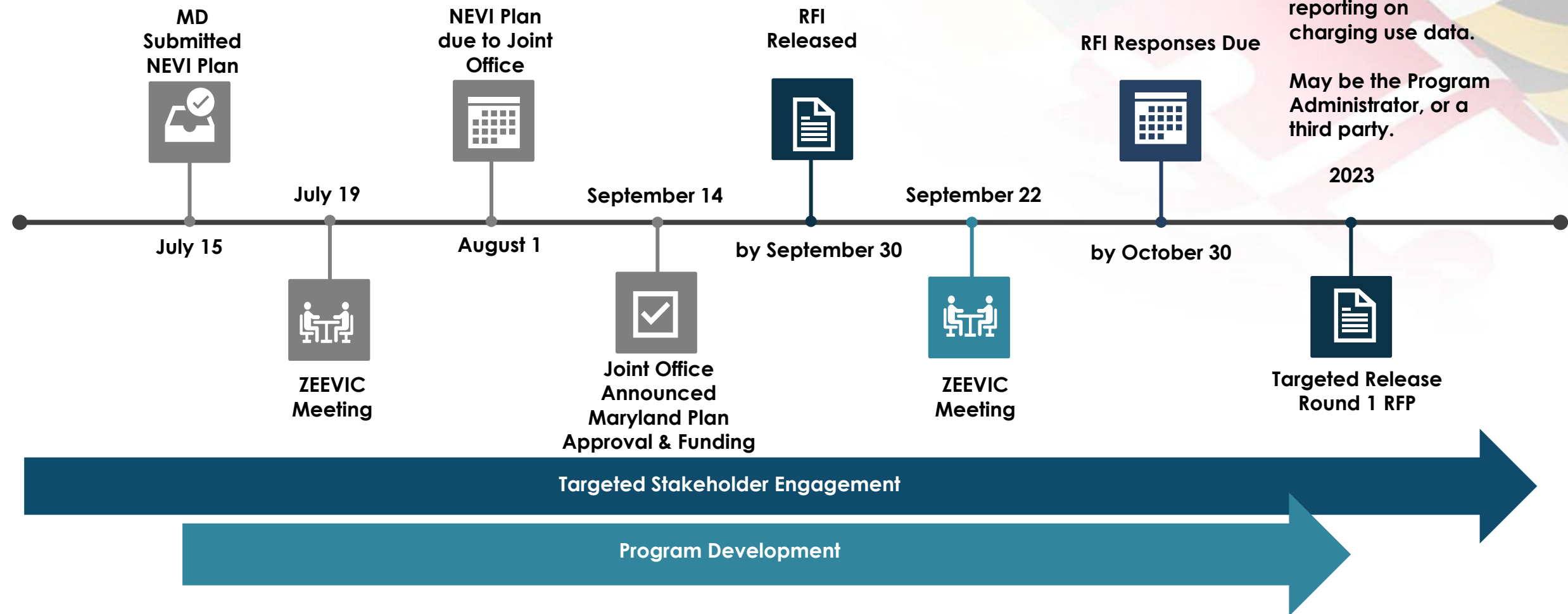
- Installation, operation, maintenance of EV charging infrastructure;
- The interoperability of EV charging infrastructure;
- Traffic control devices or on-premises signage acquired, installed, or operated in concert with EV charging infrastructure;
- Data, including the format and schedule for the submission of such data;
- Network connectivity of EV charging infrastructure; and
- Information on publicly available EV charging infrastructure locations, pricing, real-time availability, and accessibility through mapping applications.

Where are we in the process?

***New** Data RFI Due
Feb 13, 2023

To inform MDOT on
collecting,
processing, and
reporting on
charging use data.

May be the Program
Administrator, or a
third party.

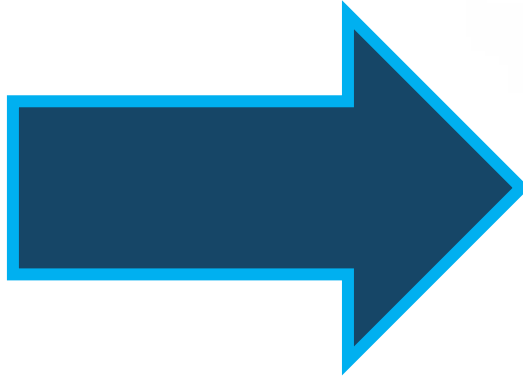
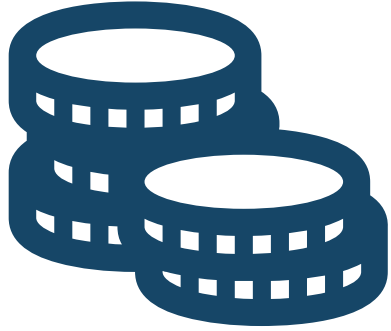


MDOT's NEVI Plan

- MDOT's State Plan to USDOT July 15, 2022
- USDOT Joint Office Approved Plan September 14, 2022
- DC Fast Chargers on 23 Alternative Fuel Corridors (AFCs)
- Environmental Justice Principles



NEVI Guidance - Justice40



**At least 40% of the
overall benefits of
federal investments**

**Disadvantaged
Communities**

Addressing Equity



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

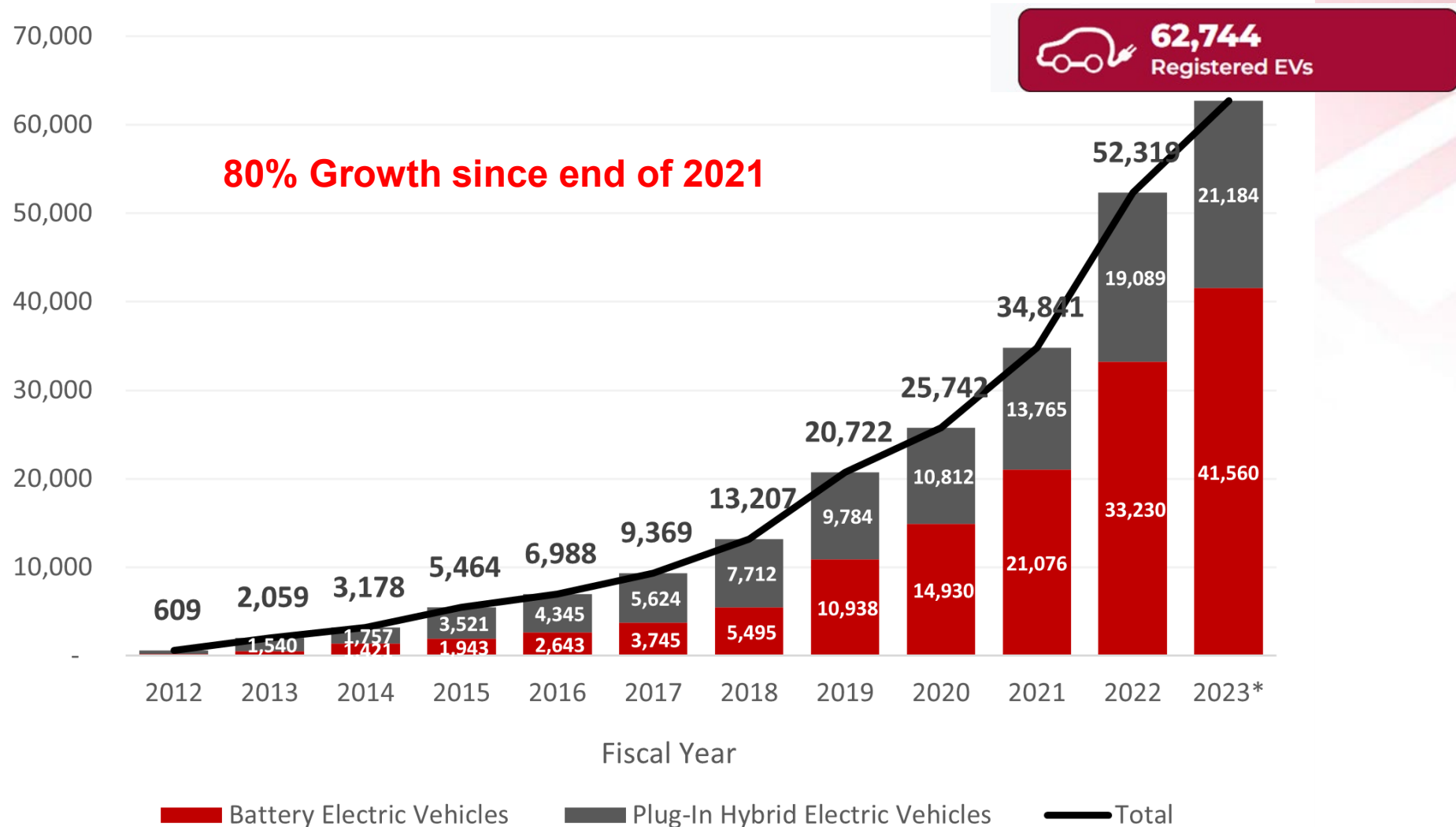
Geofencing

Website

Social Media

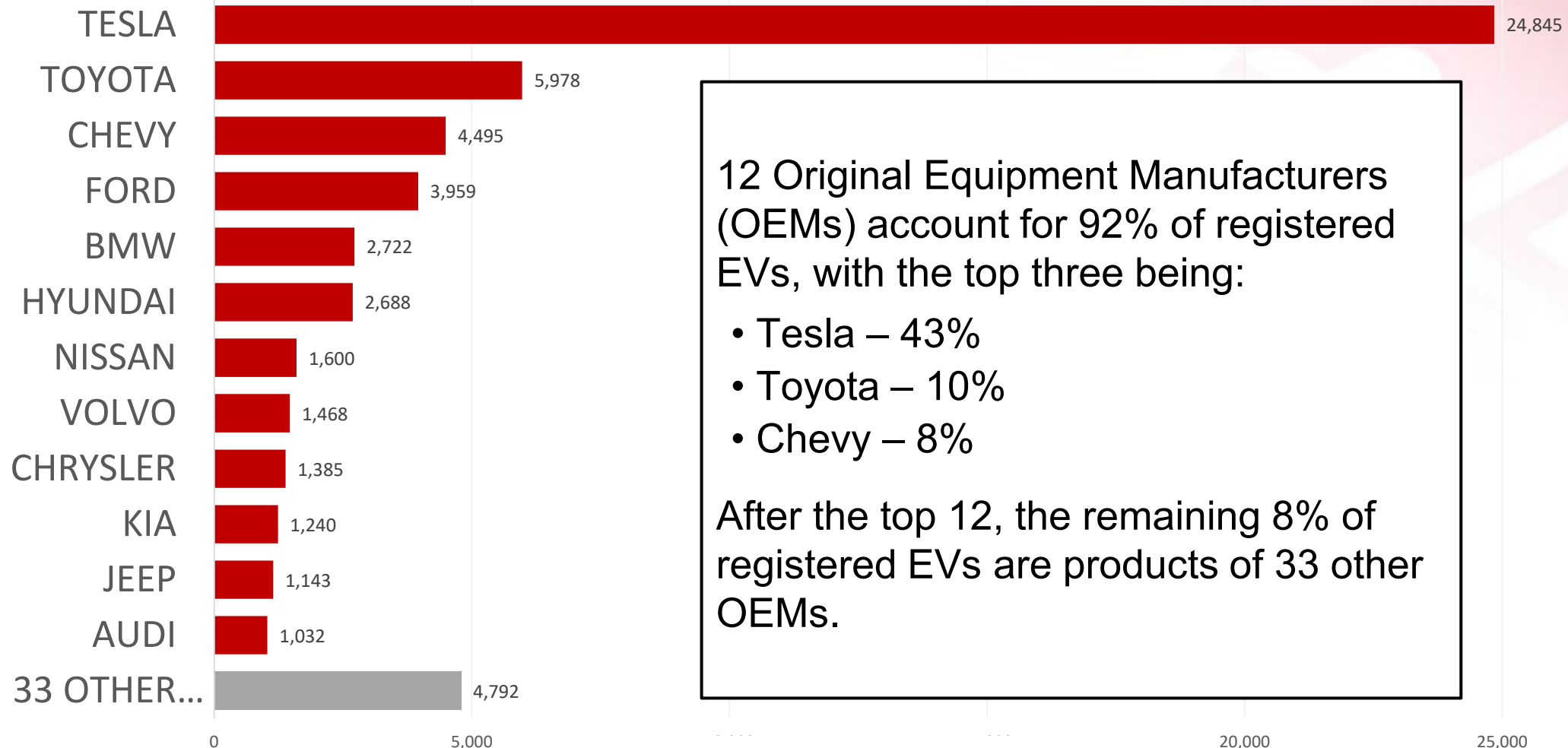
Calculators

EV Registrations in Maryland



* The end of the fiscal year (FY) is June 30th. FY 2023 is ongoing and reflects EV registration as of December 31, 2022.

EV Registrations in Maryland - Make

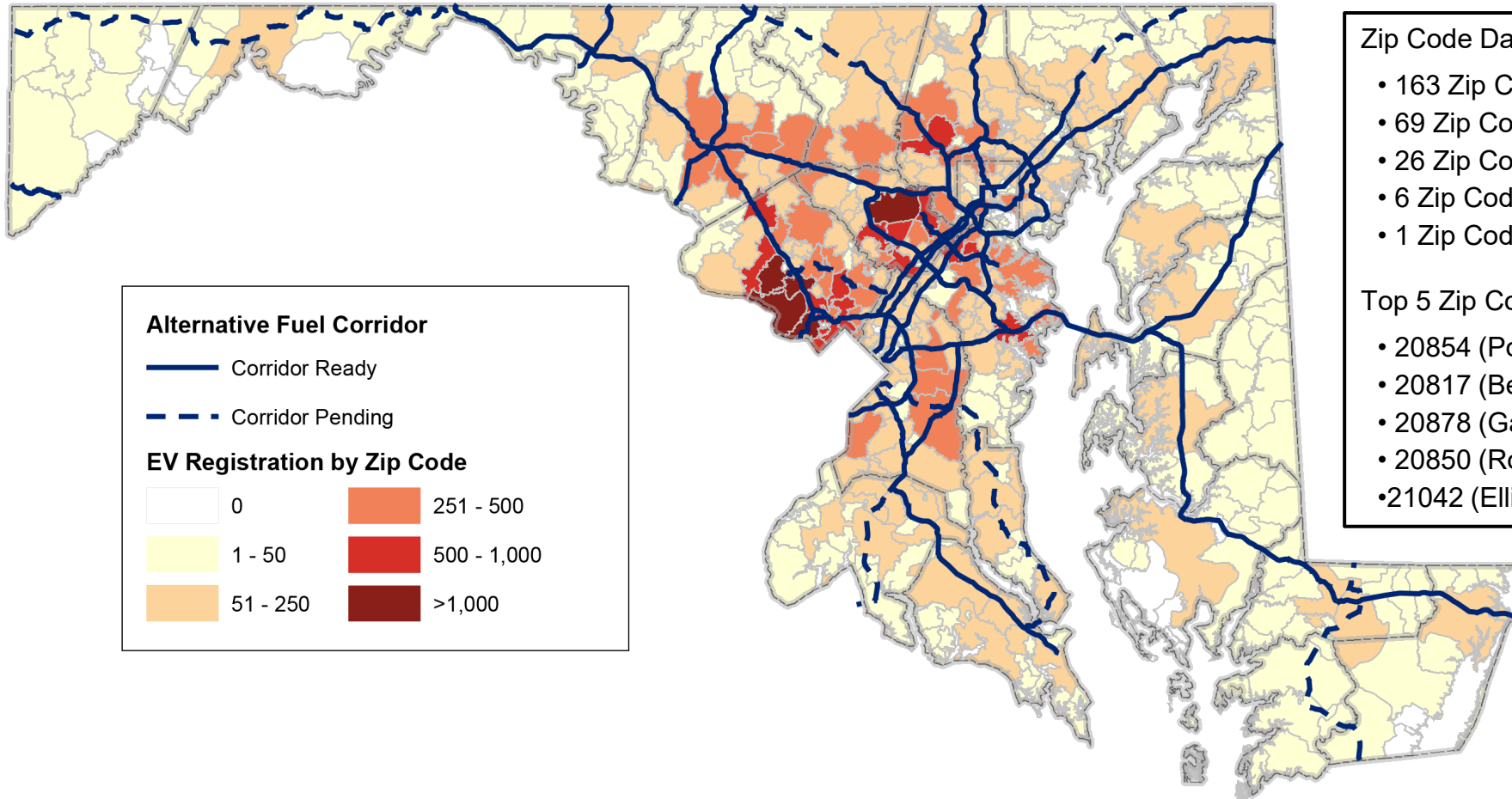


12 Original Equipment Manufacturers (OEMs) account for 92% of registered EVs, with the top three being:

- Tesla – 43%
- Toyota – 10%
- Chevy – 8%

After the top 12, the remaining 8% of registered EVs are products of 33 other OEMs.

EV Registrations - ZIP Codes



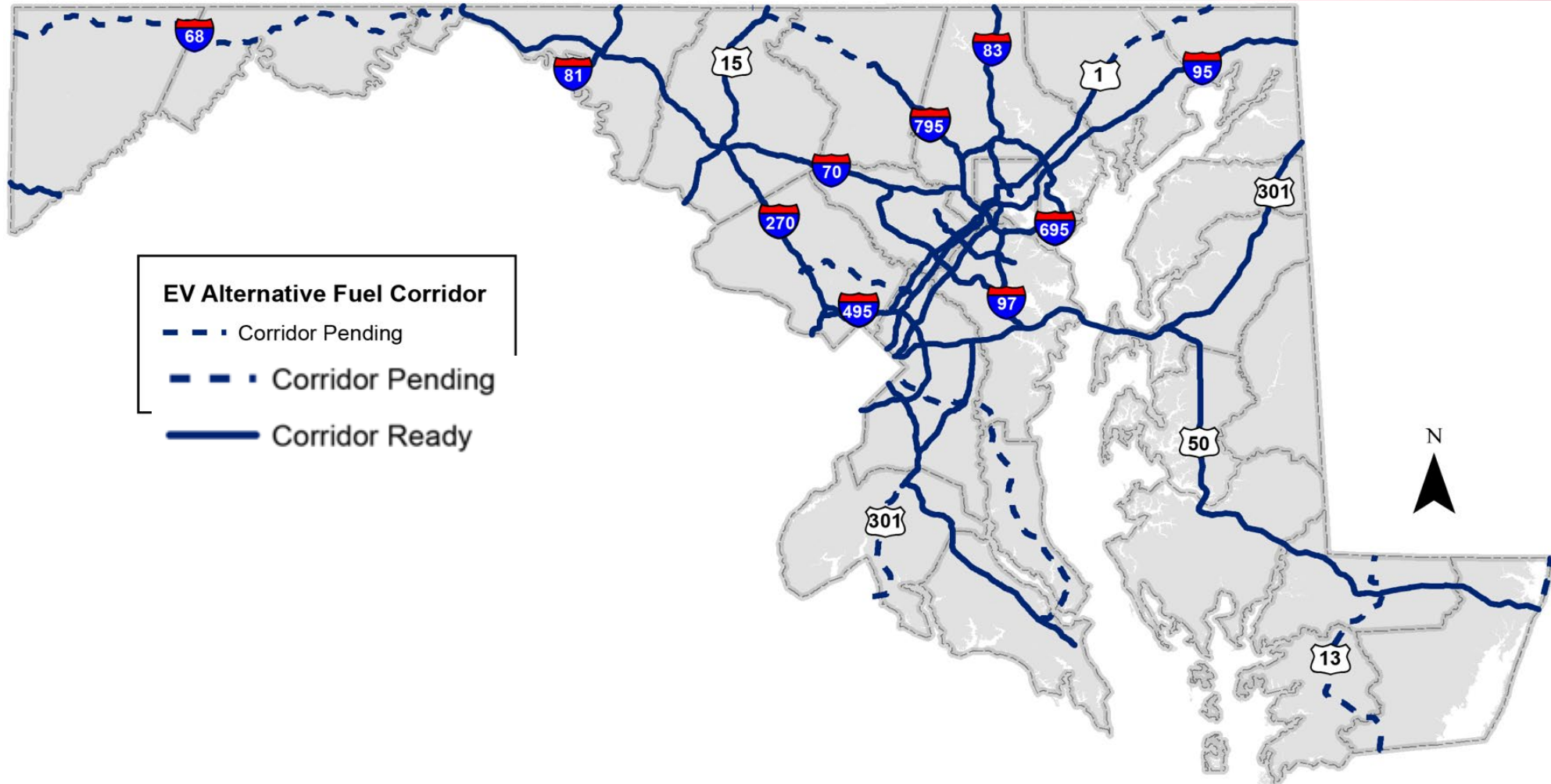
Zip Code Data:

- 163 Zip Codes > 100 EVs
- 69 Zip Codes > 250 EVs
- 26 Zip Codes > 500 EVs
- 6 Zip Codes > 1,000 EVs
- 1 Zip Codes > 2,000 EVs

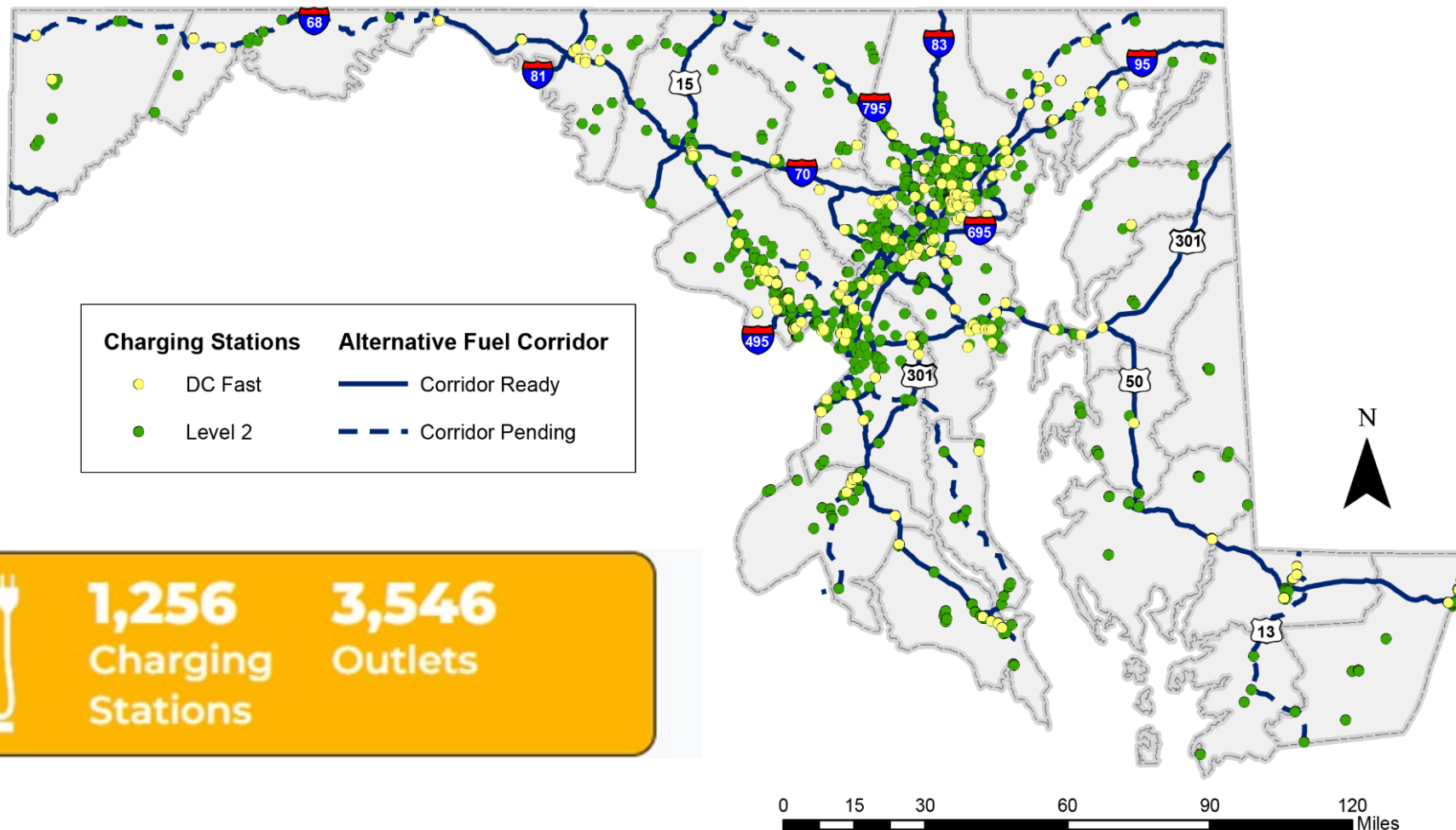
Top 5 Zip Codes:

- 20854 (Potomac) – 2,097 EVs
- 20817 (Bethesda) – 1,581 EVs
- 20878 (Gaithersburg) – 1,518 EVs
- 20850 (Rockville) – 1,505 EVs
- 21042 (Ellicott City) – 1,125 EVs

23 EV Alternative Fuel Corridors (AFCs)



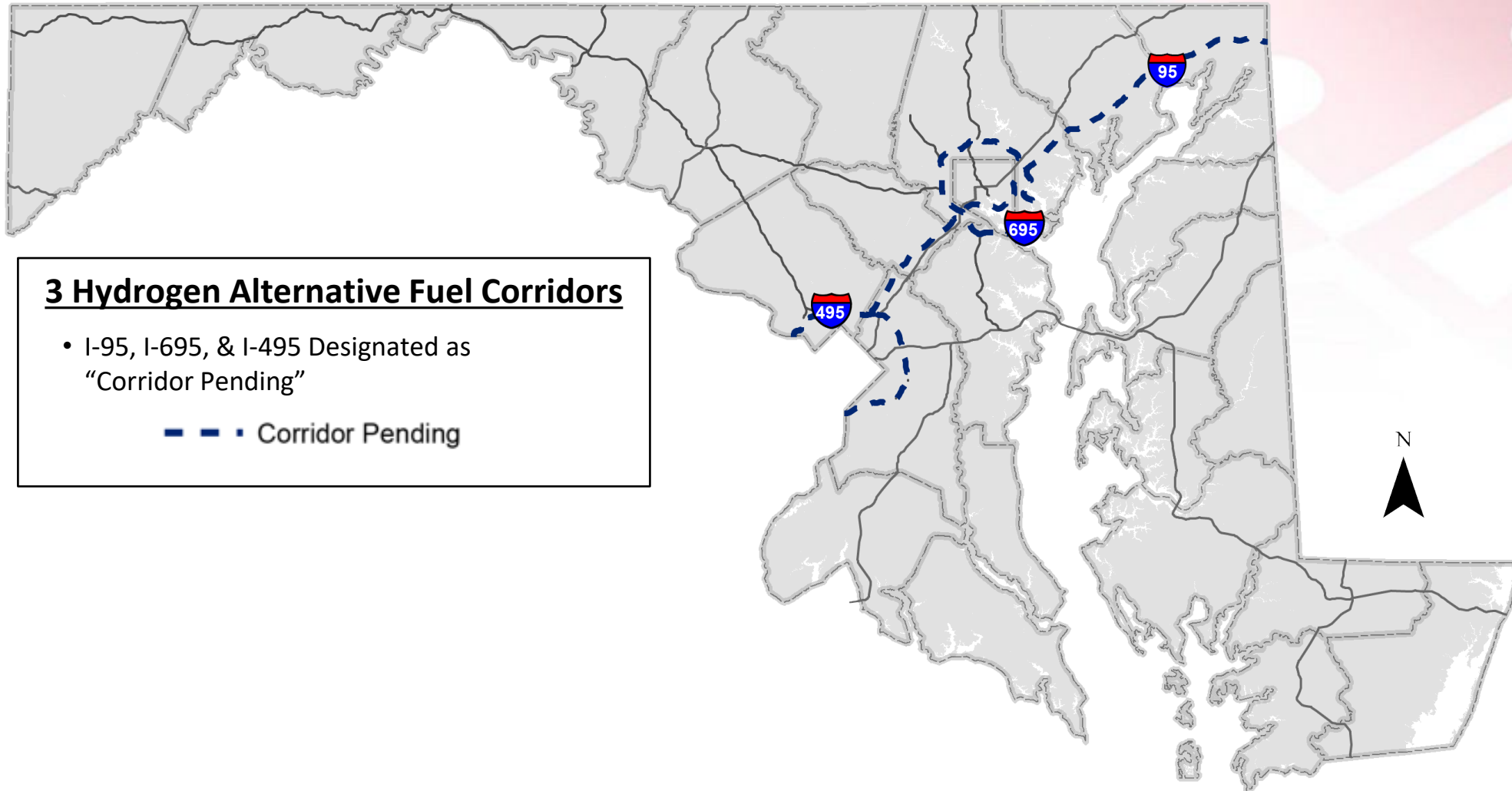
Charging Station Locations in Maryland



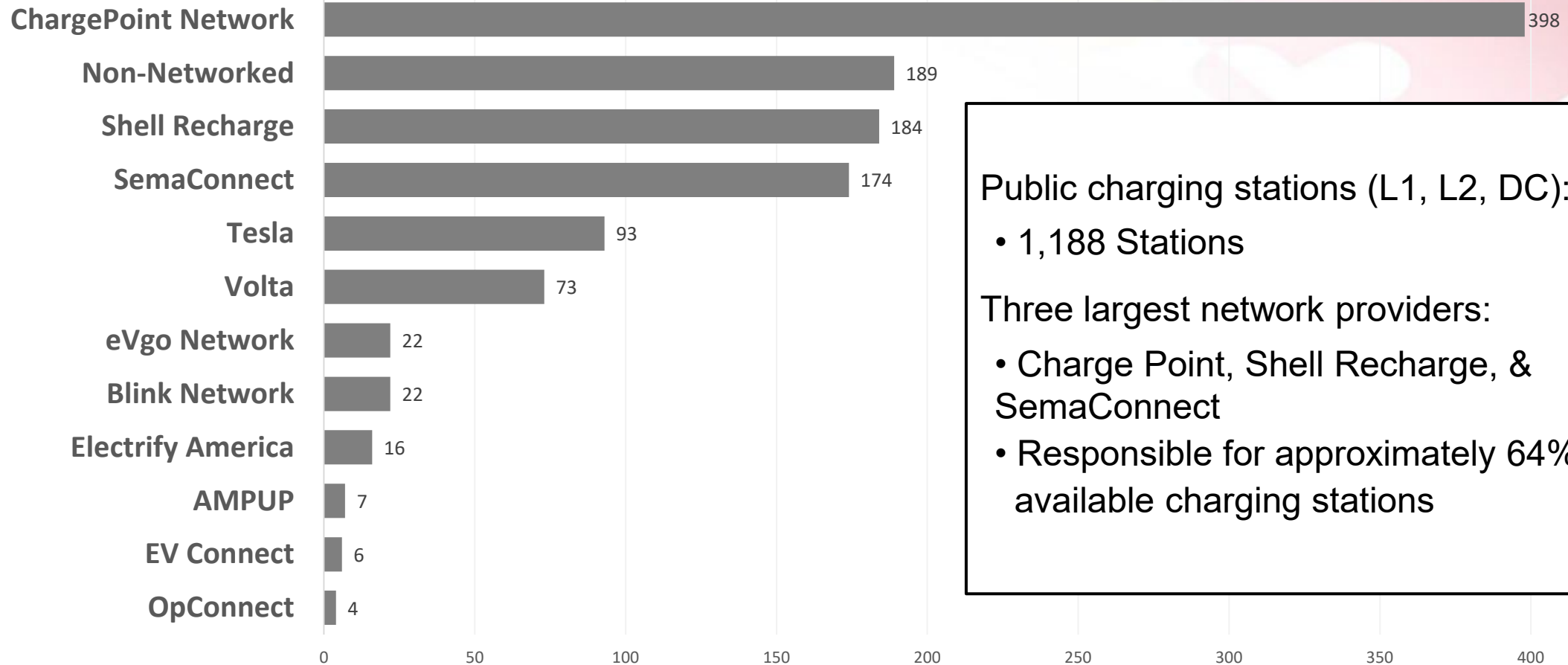
1,256
Charging
Stations

3,546
Outlets

Hydrogen Alternative Fuel Corridors



Charging Networks – All Stations



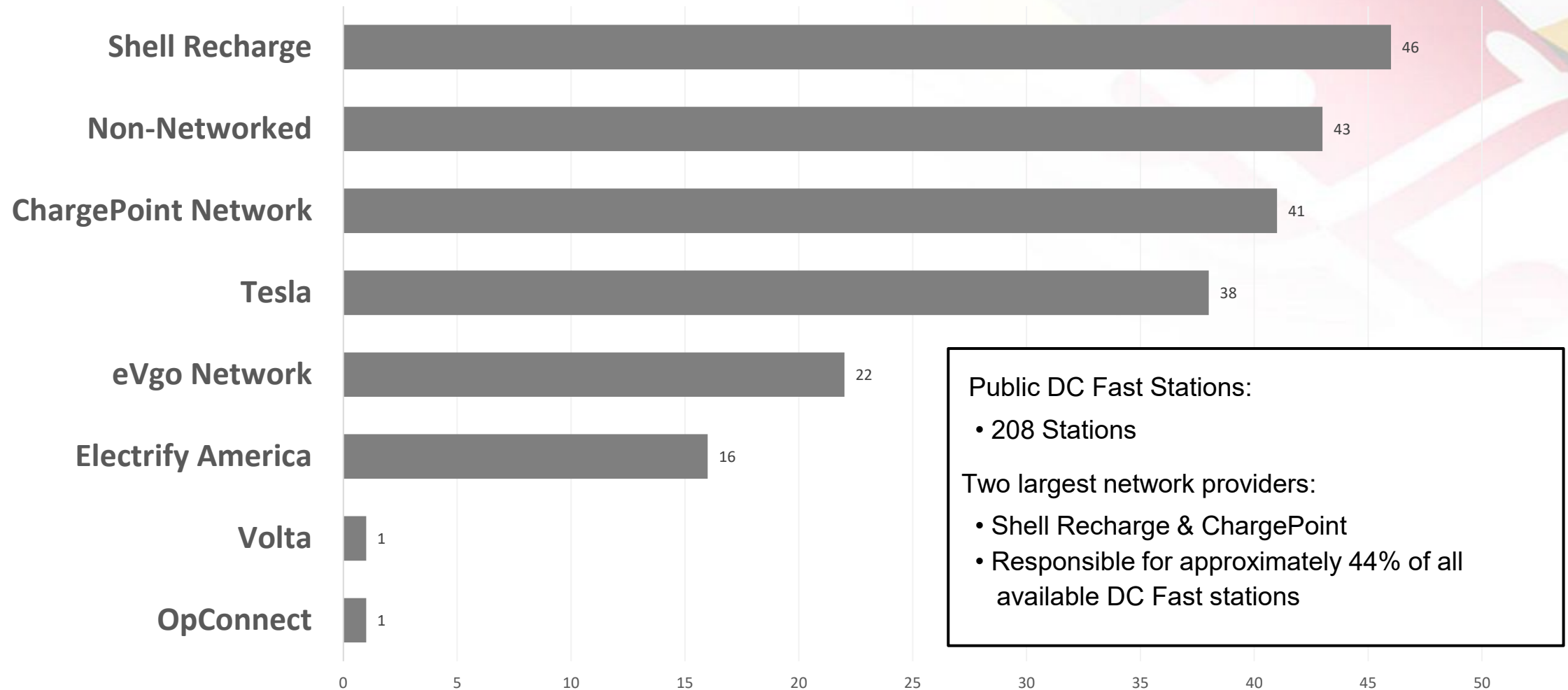
Public charging stations (L1, L2, DC):

- 1,188 Stations

Three largest network providers:

- Charge Point, Shell Recharge, & SemaConnect
- Responsible for approximately 64% of available charging stations

Charging Networks – DC Fast



Public DC Fast Stations:

- 208 Stations

Two largest network providers:

- Shell Recharge & ChargePoint
- Responsible for approximately 44% of all available DC Fast stations

Outreach

- 3 Webinars
 - 332 Total Participants
 - Interactive Polling and Q&As
 - Summarized on ZEVIP Website
- MetroQuest Survey
 - 793 Total Participants
 - 500 Participants after NEVI Plan submission
- Presentations
 - ZEEVIC, MPOs, Non-Profits, etc.
- ZEEVIC Outreach Activities
 - 6 Community Events in 2022
 - 5 Completed Events
 - Baltimore, Salisbury, Boonsboro, Westminster, Cumberland
 - 1 Upcoming Event - Leonardtown



Mentimeter Questions

How would you define a rural or disadvantaged community?

POPULATION
INFRASTRUCTURE
RESOURCES **REMOTE**
TRANSPORTATION
POLLUTION
INCOME

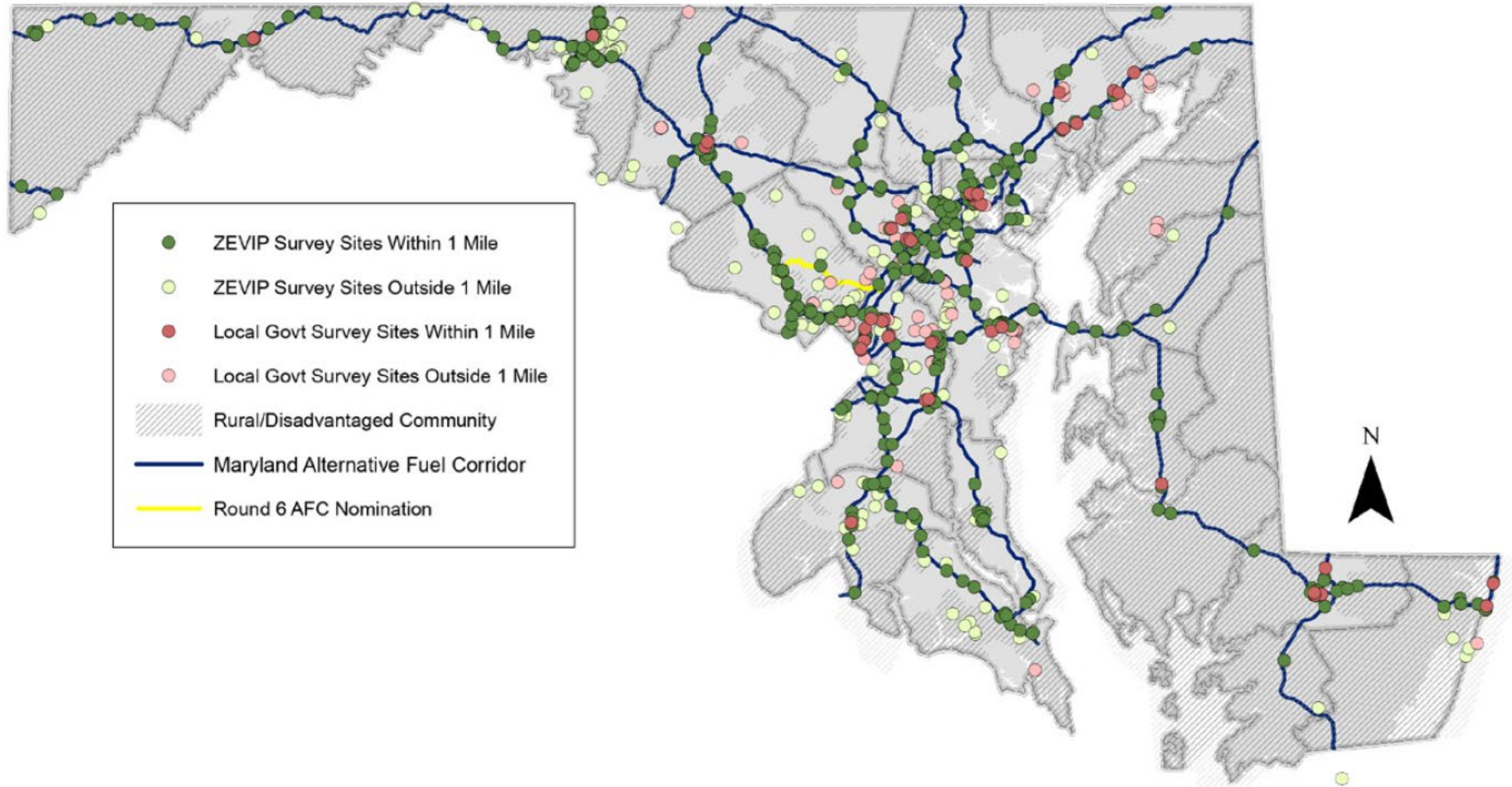
What are your top equity concerns related to EV infrastructure? Any Barriers?

LOCATION
MAINTENANCE
FUNDING **GENTRIFICATION**
ACCESSIBILITY
AFFORDABILITY
DEMAND

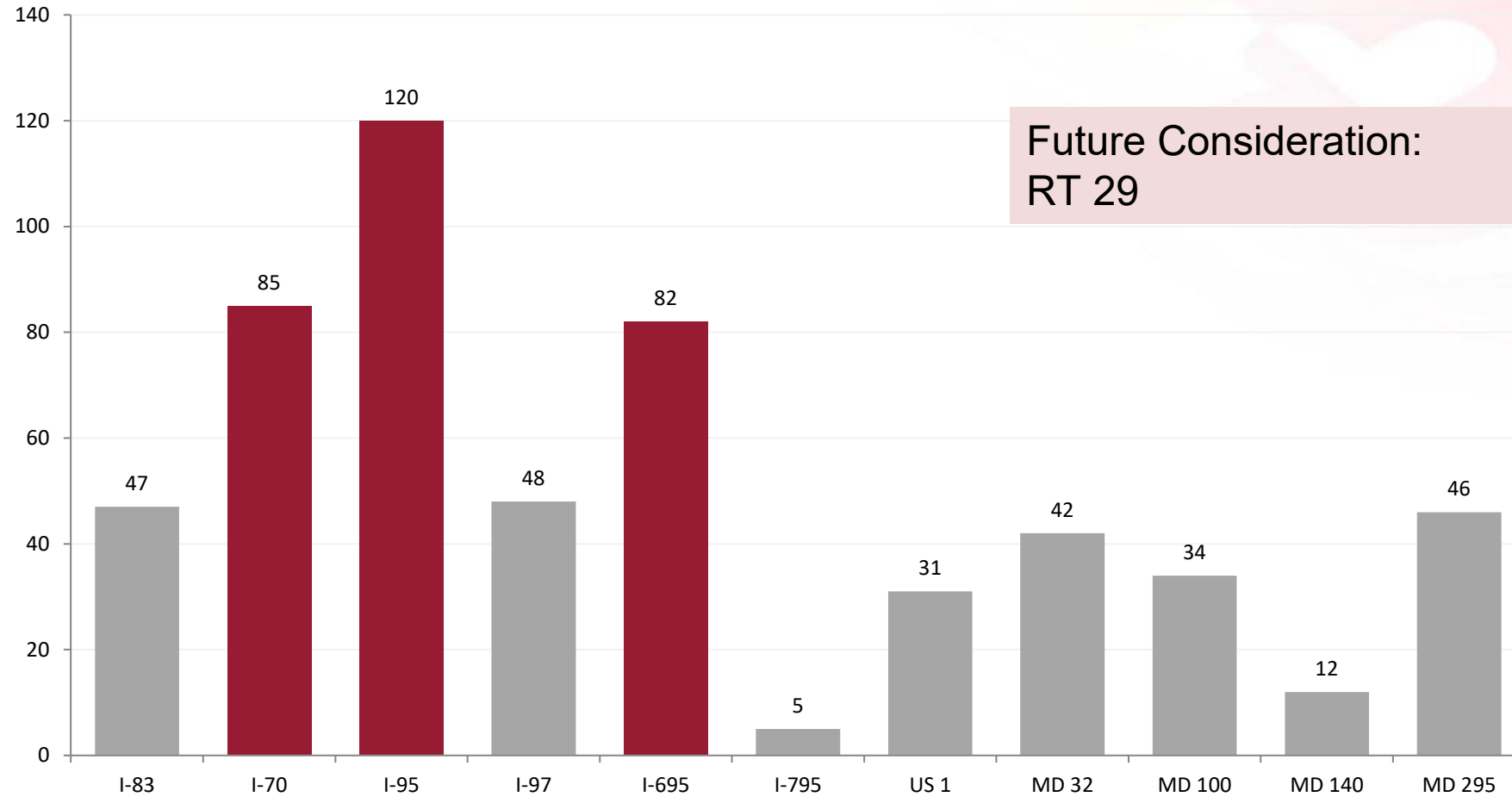
Where do you think charging would be best suited in rural and disadvantaged communities?

HOSPITALS **EATERIES**
RIDES **SCHOOLS**
GROCERY **RECREATION**
CONVENIENCE
CHURCHES **PARKS**
LOTS **PARKING**
RETAIL **WORK**
UNIVERSITIES **PARK** **HOME** **DOWNTOWNS**

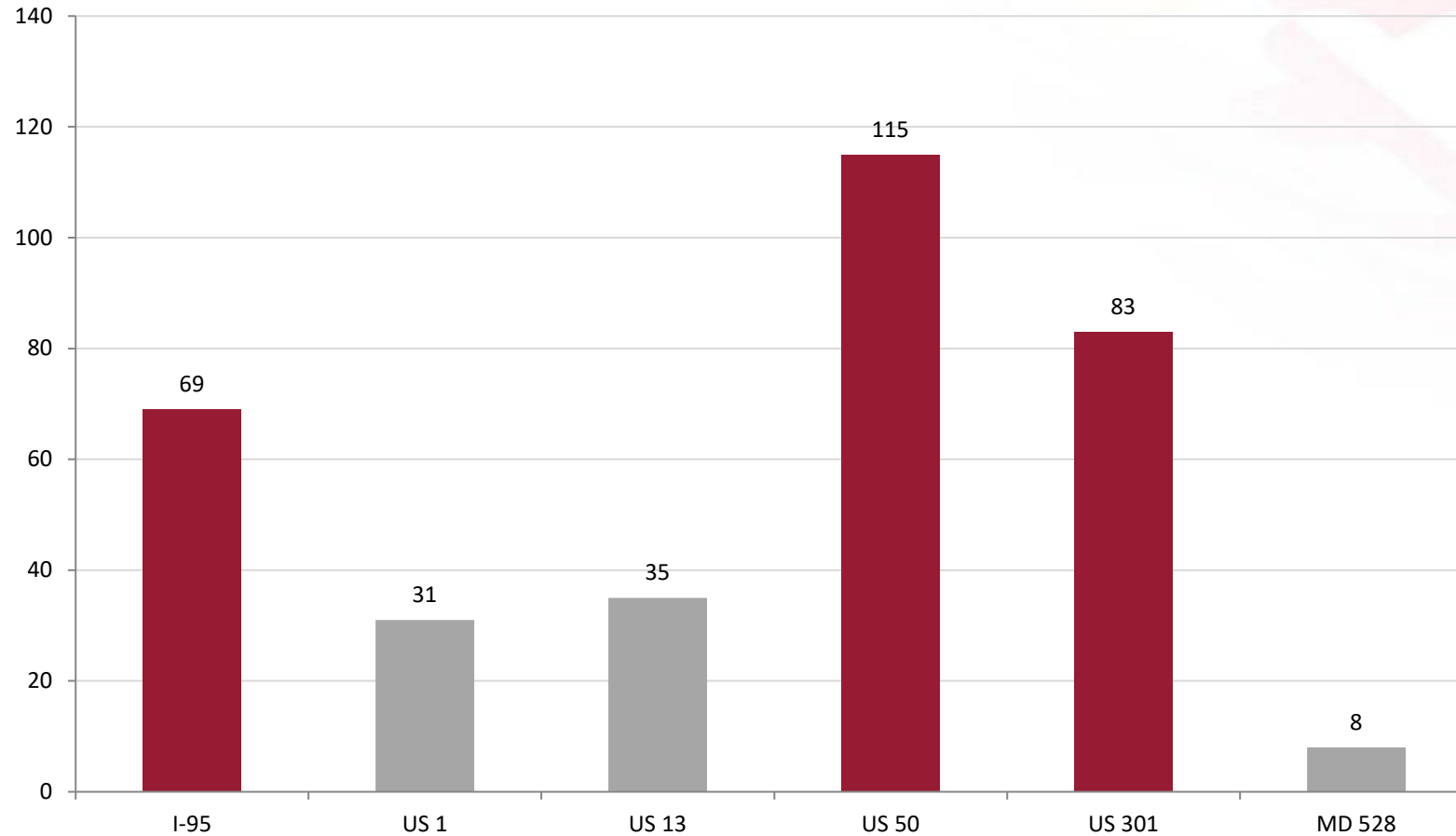
OPTIMAL CHARGING LOCATIONS IDENTIFIED VIA METROQUEST SURVEYS



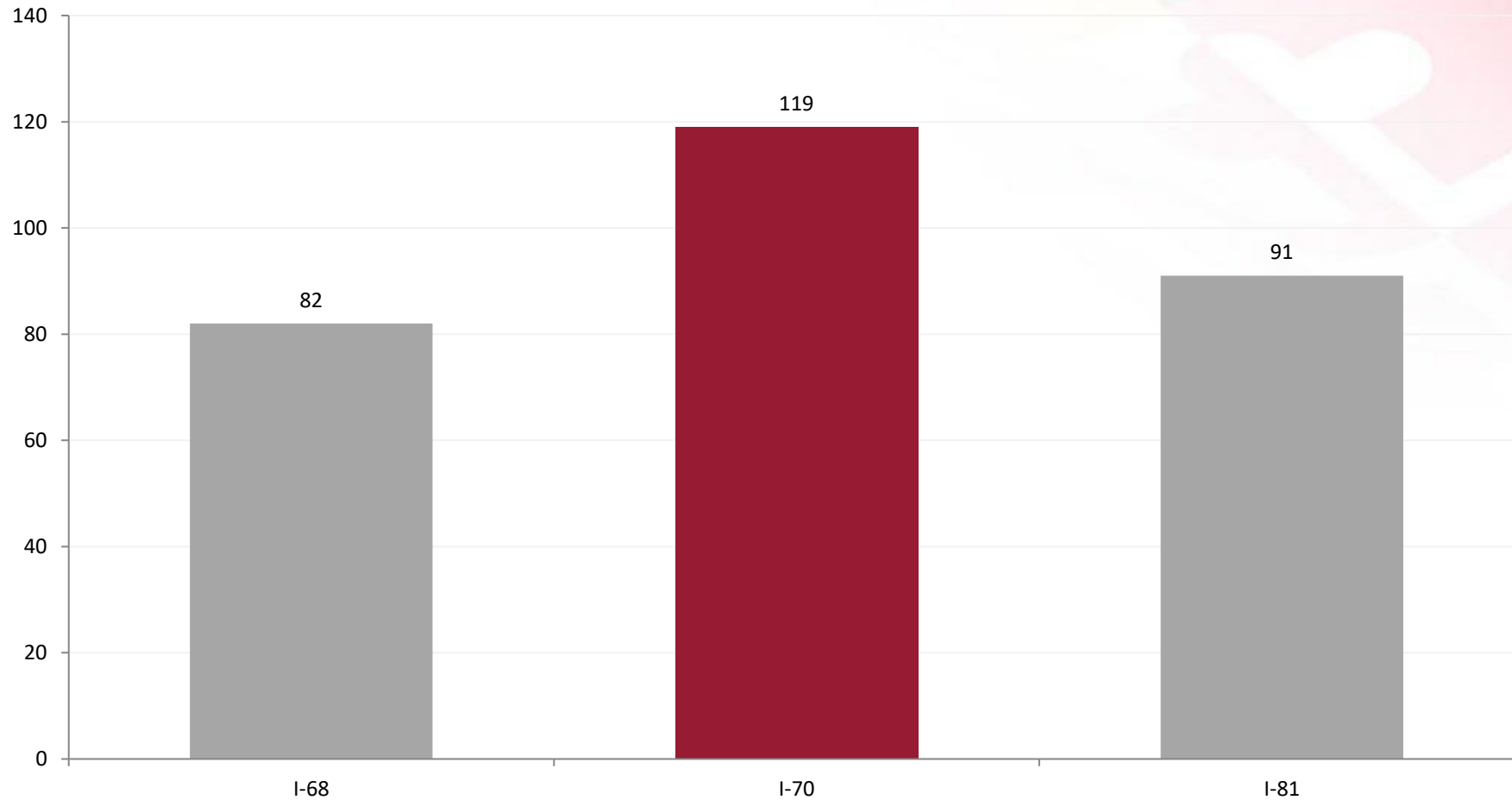
AFC Prioritization – Baltimore Region



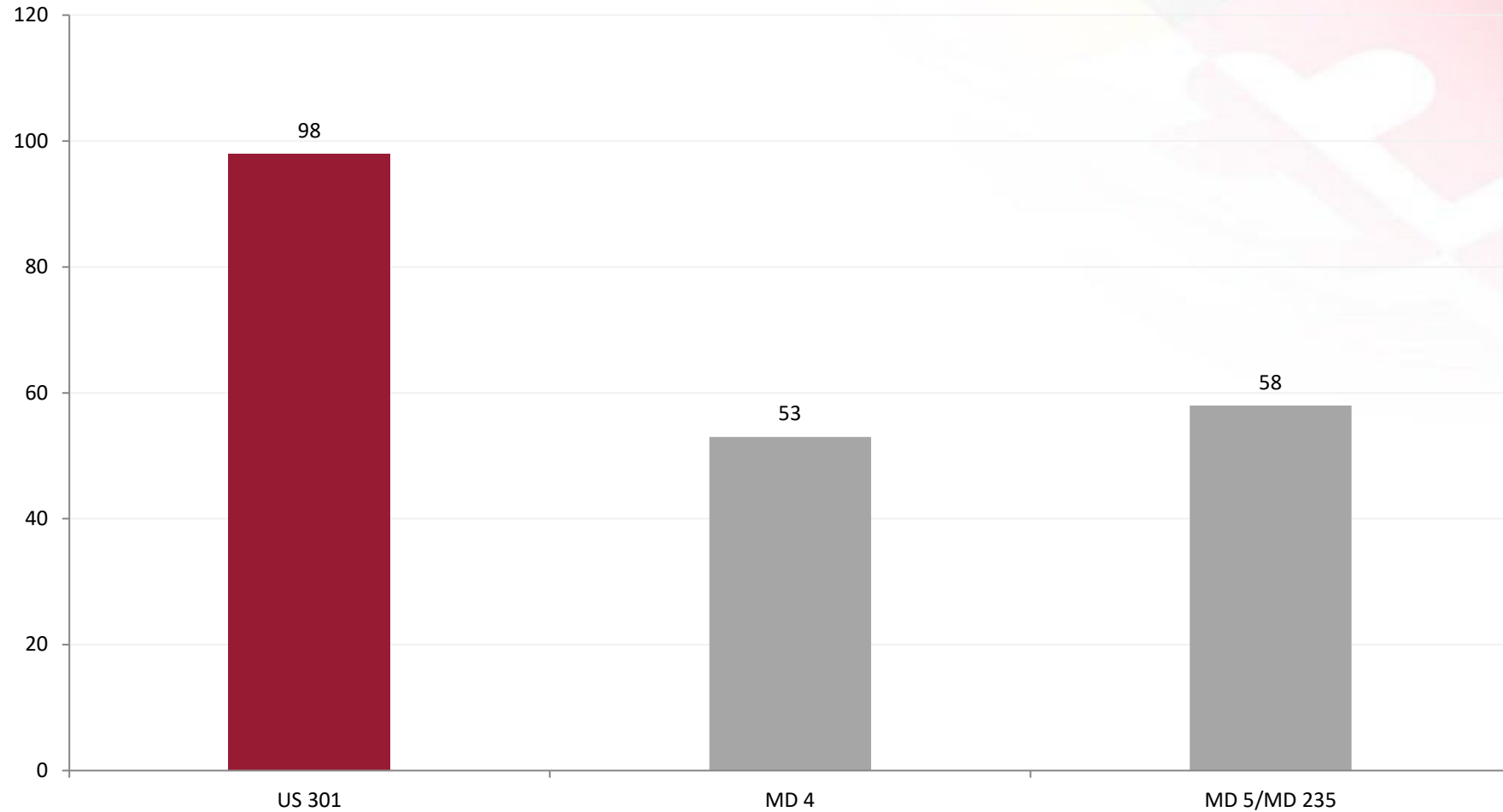
AFC Prioritization – Eastern Shore



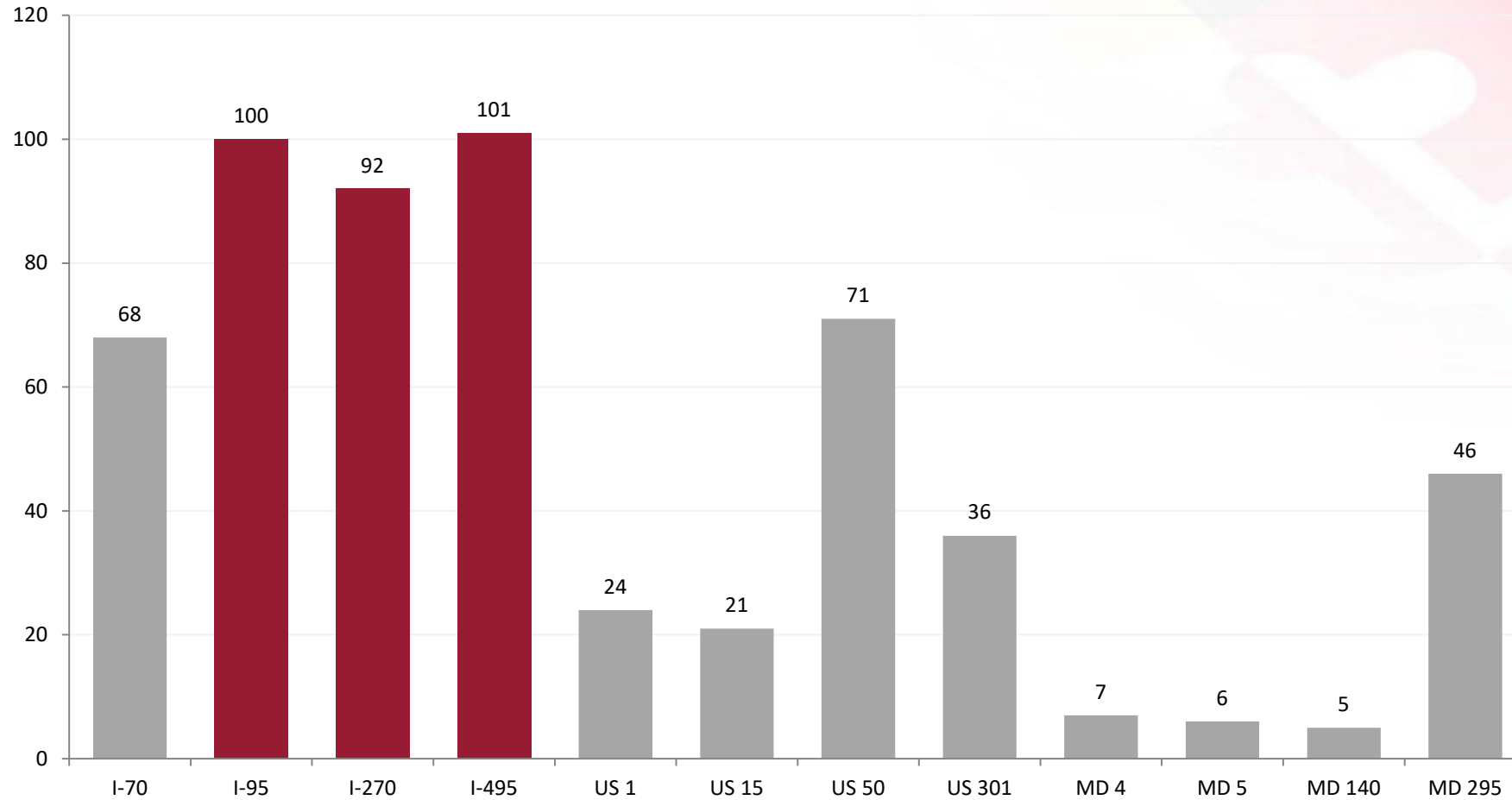
AFC Prioritization – Western MD



AFC Prioritization – Southern MD



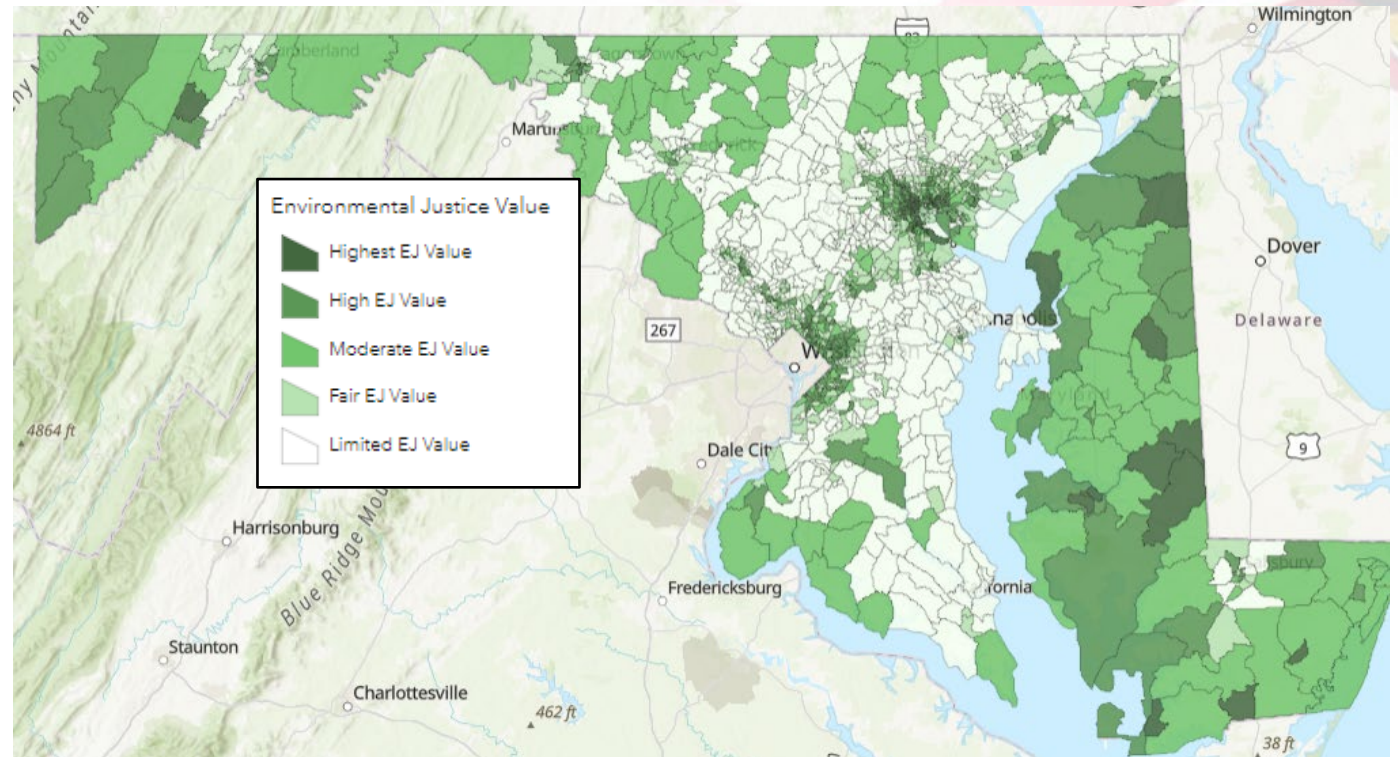
AFC Prioritization – DC Region



NEVI Toolkit

- Developed to assist in site identification, evaluation, & tracking
- Environmental Justice Score
- National Datasets
- Justice40
- CDC Social Vulnerability Index
- USDOT Historically Disadvantage Communities
- State Datasets
- UMD/MDE EJSCREEN
- Rural Areas

Transportation - Land Use - Environmental Justice



Maryland EVs & ZEVs

Climate Solutions Now Act

- **25%** of passenger vehicle purchases for state fleet must now be ZEVs.
- **100%** of passenger vehicles in the state fleet must be ZEVs by 2031
- **2031** Other light-duty vehicles must be ZEVs by 2036.

Section 7-406 - Conversion to zero-emissions busses

“Beginning in fiscal year 2023, the Administration may not enter into a contract to purchase buses for the Administration's State transit bus fleet that are not zero-emission buses.”

- MDOT MTA - Convert 50% transit bus fleet to ZEVs by 2030
- Currently \$436 million Budget
- 350 buses out of a 700-bus fleet
- New ZEV Buses starting in 2023
- BEB Training and Apprenticeship Program



EV & Solar Infrastructure

EXTENDED & EXPANDED TAX CREDITS FOR EV CHARGERS & CLEAN ENERGY

- IRA restores expired tax credits for installing EV chargers in homes and businesses

ALTERNATIVE REFUELING PROPERTY

- Targets accelerated installation of EV charging infrastructure

INVESTMENT TAX CREDIT

- Provides a tax credit based on capital investment in a variety of renewable and conventional energy technologies

ENERGY INVESTMENT CREDIT

- Tax credit for capital investment to deploy a variety of qualified clean energy technologies

CLEAN ELECTRICITY INVESTMENT CREDIT

- A technology neutral tax credit for capital investment to deploy clean energy facilities and storage technologies

ENERGY EFFICIENT COMMERCIAL BUILDINGS DEDUCTION

- A deduction for building energy efficient commercial buildings or to retrofit commercial buildings to become energy efficient

Multi-State Agreements

- **Mid-Atlantic Electrification Partnership**
 - D.C., West Virginia, and Virginia
- **Multi-State ZEV Action Plan**
 - California, Connecticut, Maryland, Massachusetts, New York, Oregon, Rhode Island and Vermont
- **Multi-State ZEV Task Force**
 - California, Colorado, Connecticut, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington and Washington, D.C.
- **Mid-Atlantic Electric School Bus Experience (MEEP)**
 - Maryland, New Jersey, Pennsylvania, Virginia and Washington, D.C.



Thank You!



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