



MARYLAND
ZERO EMISSION
Electric Vehicle Infrastructure Council

May 26, 2022

Agenda

- Welcome and Announcements
- Public Comments
- Zero Emission Vehicle Infrastructure Plan (ZEVIP) Update
- Alternative Fuel Corridor Nomination
- Federal Funding Opportunities
- 2022 Legislative Session Summary
- Social Media and MarylandEV Updates
- Utility Updates
- State Agency Updates
- Closing Remarks



Welcome and Announcements

Deputy Secretary Lewis, MDOT

New ZEEVIC Member



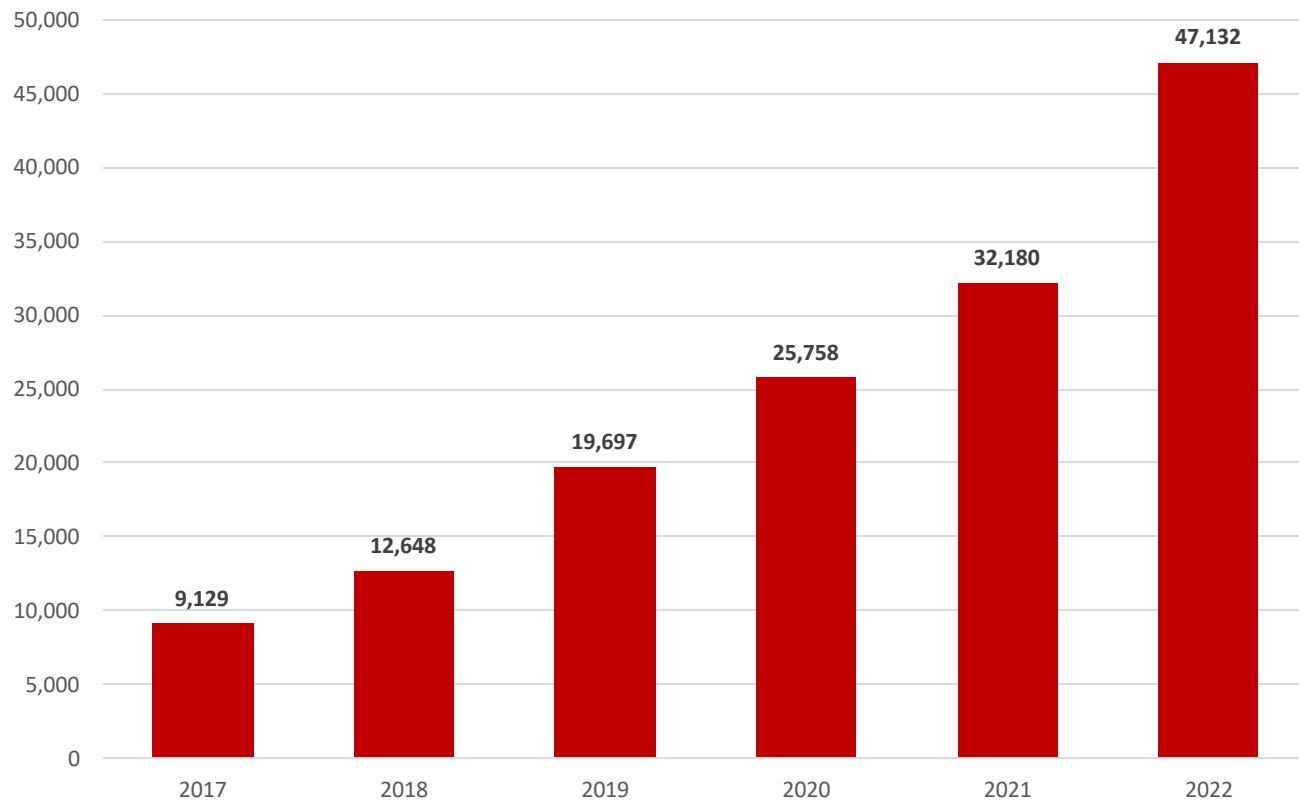
Quiera Harris

Replacing Liam Davis as the Maryland Association of Counties (MACO) Representative – Urban or Suburban region

Valet Regulations, Manager
Parking Authority of Baltimore City

EV Registrations – Snapshot

EVs Registered at the end of April 30th



12 Month Period	EVs Registered at Close-out	New EVs Registered during 12 Month Period	% Growth
5/31/17 - 4/30/18	12,648	3,395	36.7%
5/31/18 - 4/30/19	19,697	6,793	52.6%
5/31/19 - 4/30/20	25,758	5,679	28.3%
5/31/20 - 4/30/21	32,180	6,664	26.1%
5/31/21 - 4/30/22	47,132	13,962	42.1%

Announcements

- Maryland ranked 3rd best state to own an electric vehicle by [Lendingtree](#)
 - Based on vehicle fatalities, electricity costs, state tax credits, public charging infrastructure, and EV registrations

Public Comments





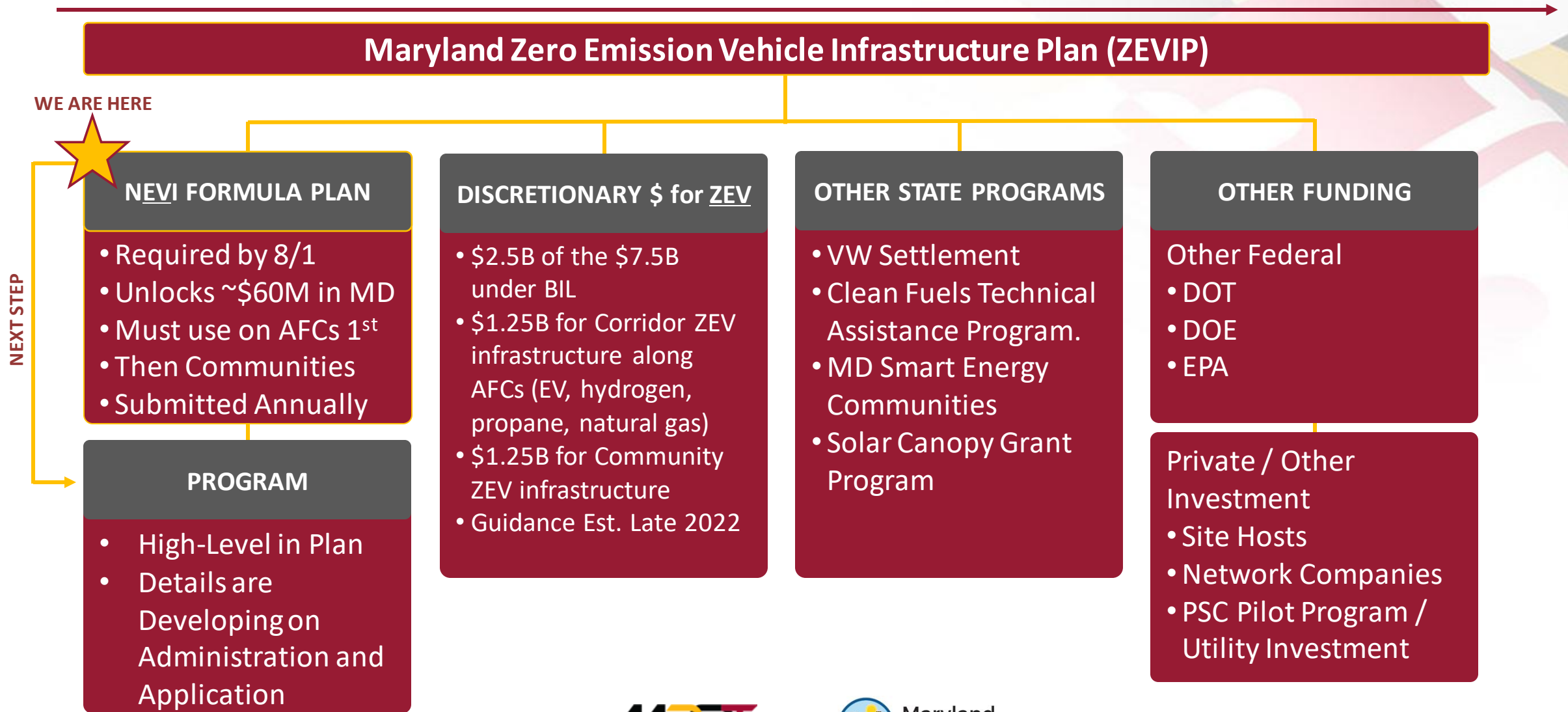
Zero Emission Vehicle Infrastructure Plan Update

Dan Janousek, MDOT

ZEVIP Update Agenda

- Overview
 - What is the difference between NEVI and ZEVIP?
- Public Participation
 - AFC Corridor Prioritization
 - Identified Charging Locations
 - Summary of Menti
 - Website Metrics
- Next Steps
 - Schedule
 - Stakeholder & Community Outreach
 - Next Webinar

What are ZEVIP and NEVI?



Requirements for NEVI Formula Plan / Program

1 | Build Out **ALL** Existing Corridors

2 | Obtain Certification

3 | Invest in Communities

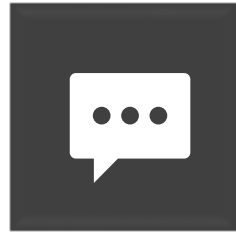
Build Out Requirements

- ≤ 50 miles between one station/site and the next on corridor (Minimum 2 Stations)
- ≤ 1 mile from Interstate exits or highway intersections along the corridor
- Include 4 Combined Charging System (CCS) connectors - Type 1 ports (Simultaneously charging 4 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 4 ports)

NEVI 7 Funding Categories

1. Acquisition and installation of EV charging infrastructure
2. Operating assistance
3. Development phase activities
4. Traffic control devices and on-premise signs
5. Data sharing about EV charging infrastructure
6. Acquisition or installation of traffic control devices located in the right-of-way
7. Mapping and analysis activities

NEVI Plan Components



Introduction



State Agency
Coordination



Public
Engagement



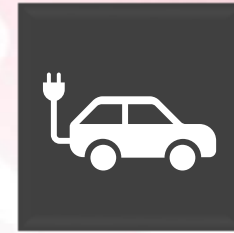
Plan Vision &
Goals



Contracting



Existing &
Future
Conditions



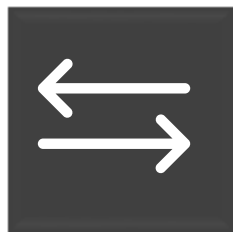
EVSE
Deployment



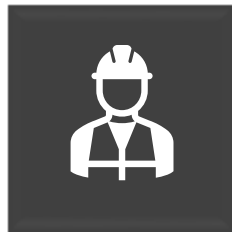
Implementation



Civil Rights



Equity
Considerations



Labor &
Workplace
Considerations



Cybersecurity



Program
Evaluation



Discretionary
Exceptions

Public Participation



MetroQuest Survey

- Survey launched March 24th
 - 210 Participants
- Opportunity for Feedback/Comment
 - Vision and Goals
 - Prioritization
 - Infrastructure Siting

Maryland ZEVIP Stakeholder Survey More at: <https://evplan.mdot.maryland.gov/>

1 Introduction 1 »

Maryland Zero Emission Vehicle Infrastructure Plan

WELCOME

Introduction

Maryland is required to develop and submit a plan to Federal Highway Administration (FHWA) to access National Electric Vehicle Infrastructure (NEVI) formula funding. The **Maryland Zero Emission Vehicle Infrastructure Plan (ZEVIP)** will be developed jointly by the Maryland Department of Transportation (MDOT) and the Maryland Energy Administration (MEA) and in collaboration with our stakeholders and communities to strategically deploy publicly accessible charging infrastructure.

→ Next

Maryland will receive approximately **\$60 million** over 5-years to support the expansion and deployment of EV charging infrastructure along designated AFCs.

MDOT
MARYLAND DEPARTMENT
OF TRANSPORTATION

Maryland
Energy
Administration

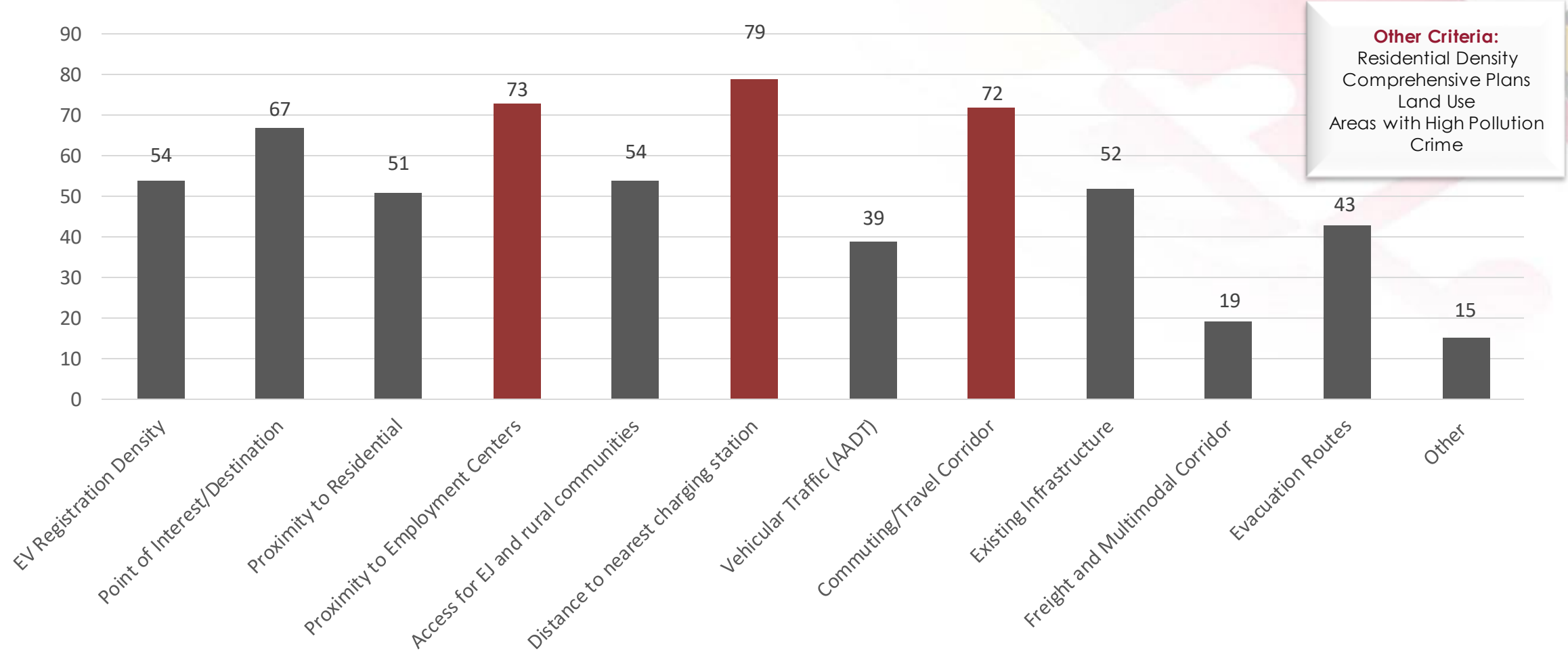
2 GOAL RATING

3 PRIORITIZATION

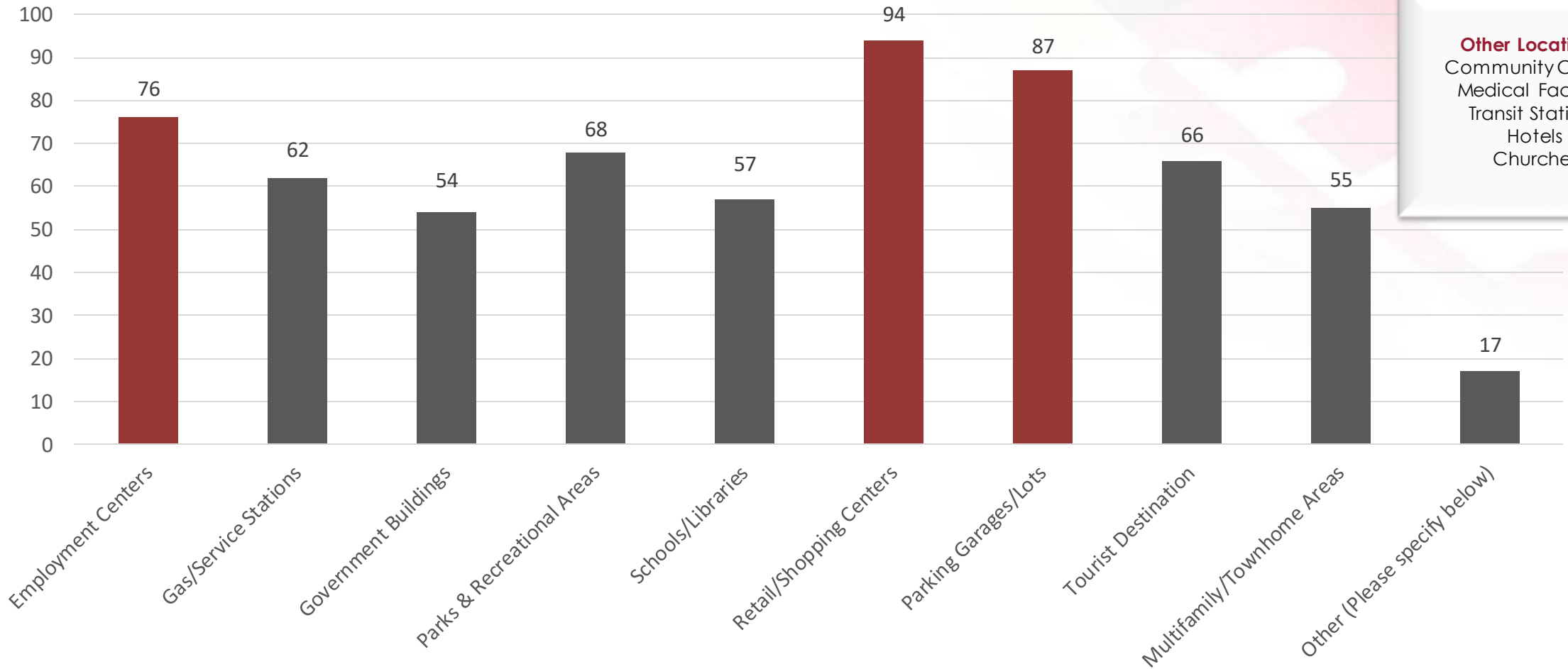
4 MAPPING

5 WRAP UP

MetroQuest Prioritization Criteria Results

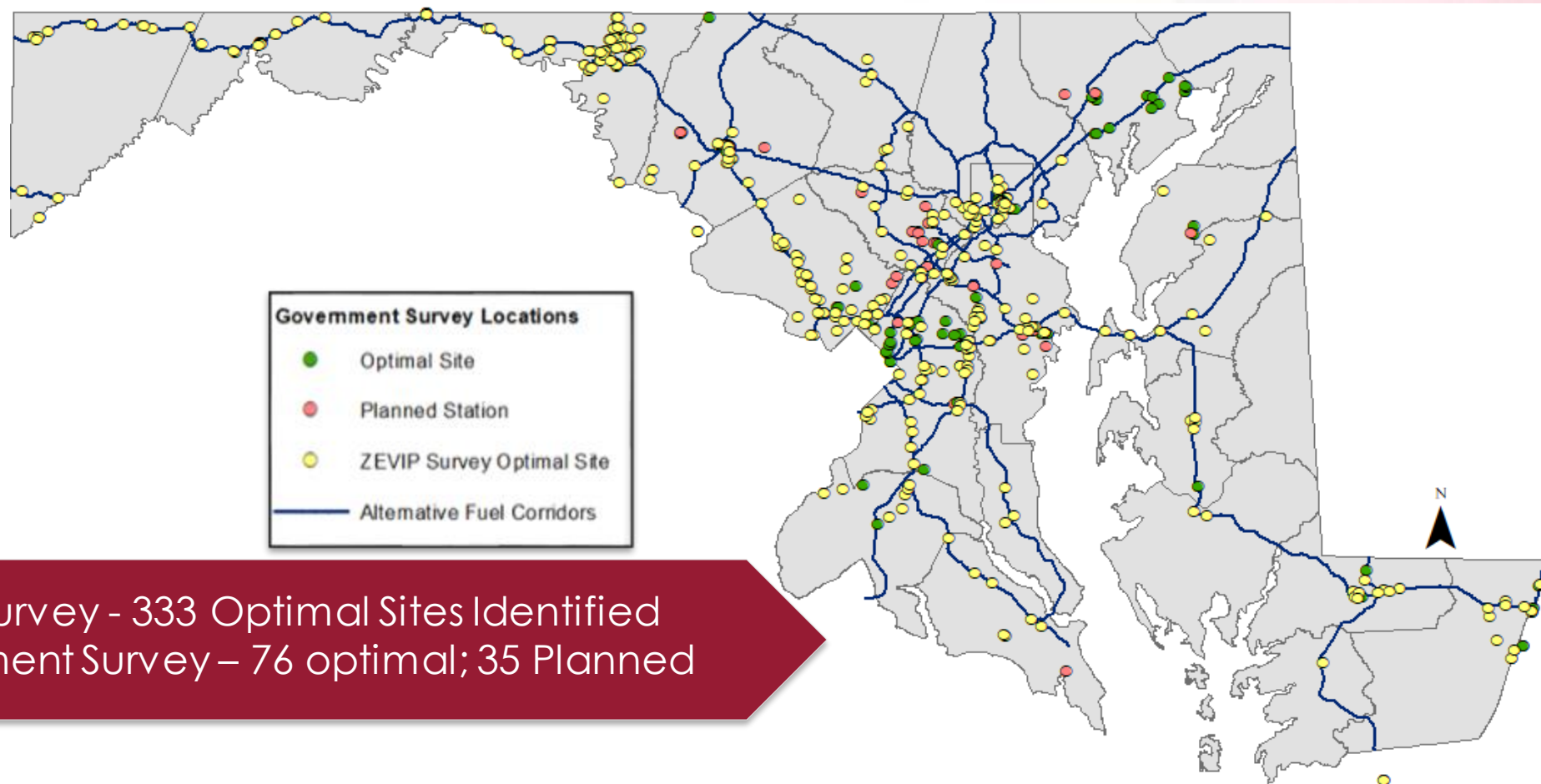


MetroQuest Preferred Location Results



Other Locations:
Community Centers
Medical Facilities
Transit Stations
Hotels
Churches

MetroQuest Location Summary

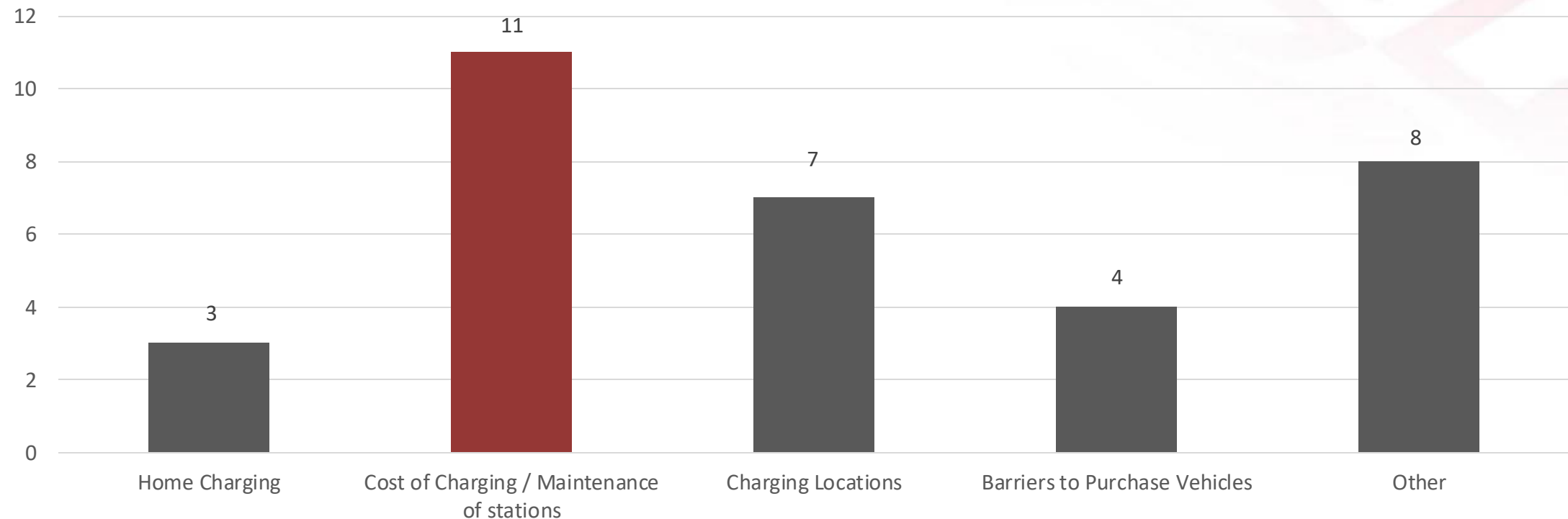


ZEVIP Survey - 333 Optimal Sites Identified
Government Survey - 76 optimal; 35 Planned

Menti Summary Continued

What are your top equity concerns related to EV infrastructure?

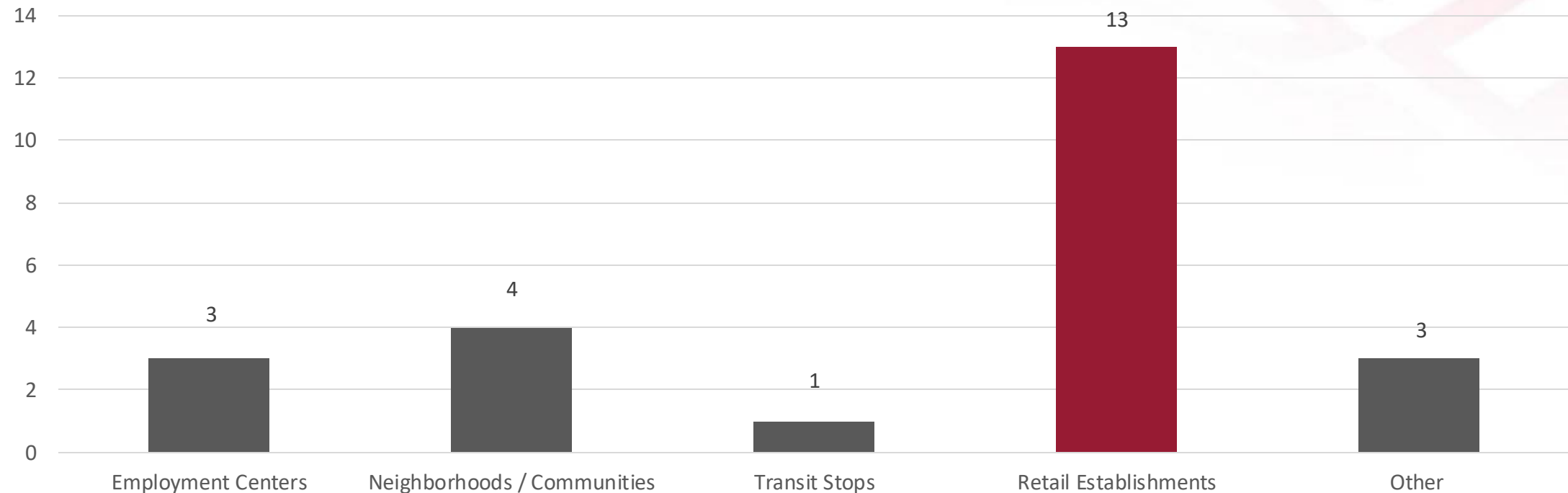
Other:
Lack of Engagement
Gentrification
Future Equipment
Concerns



Menti Summary Continued

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

Other Criteria:
Parking Lots
Churches
Trailheads



EV Plan Website Metrics



400
Page
Views

Includes Homepage and
Stay Engaged page

19th, 26th, 27th
(Highest-trafficked Dates)



Eblast for webinar sent 19th
Day before Webinar 26th
Webinar 27th

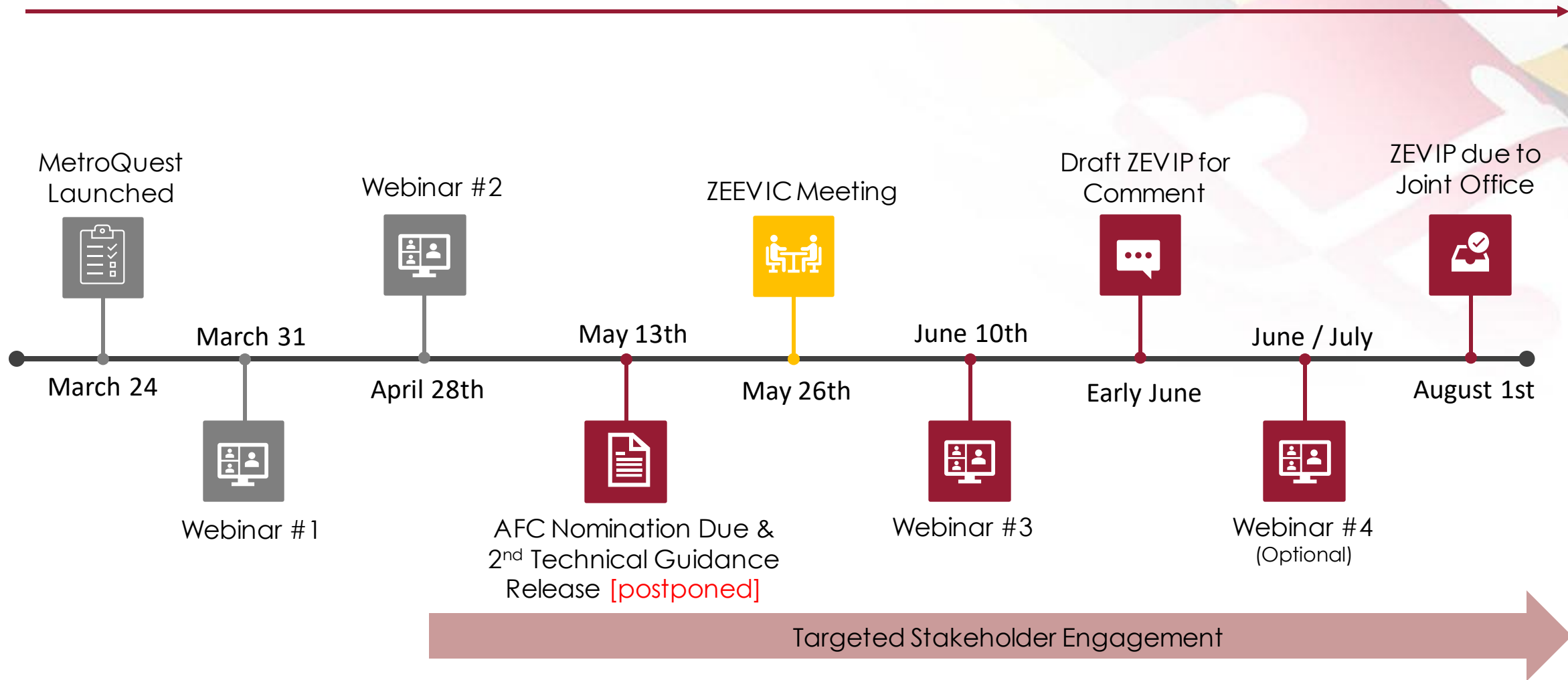


371
Total
Sessions

Throughout
April 2022

Next Steps

Schedule – Subject to Change



Stakeholder Engagement



Utilities



**Network
Companies**
[EV Charging Manufacturers]



**Disadvantaged
/ Rural
Communities**



**OEM's /
Automakers**



**Planning
Partners**







**Potential Site
Hosts**

Community Engagement

- MDOT is working to increase EV Awareness through an outreach effort focused on public education.
- **Total Events: 25**
- **Total Touchpoints since 2017: 7,370**
- **Other Languages: Spanish & Korean**



Data Analysis – Location Based Tool

EV Infrastructure	Land Use	Socioeconomic	Existing Outreach	Other
 <ul style="list-style-type: none">• Charging Stations<ul style="list-style-type: none">- Meets FHWA Criteria- Other DCFC Stations• Alternative Fuel Corridors<ul style="list-style-type: none">- 1-Mile Buffer- AADT- Type – Interstate, US Route, State	 <ul style="list-style-type: none">• Most Recent Land Use:<ul style="list-style-type: none">- Industrial- Commercial- Institutional- Residential – High, Medium, low density	 <ul style="list-style-type: none">• MDE Socioeconomic EJ Score• Justice 40• Historical Disadvantaged Communities• Designated Rural Area• CDC SVI Household Composition• CDC SVI Housing Type & Transportation	 <ul style="list-style-type: none">• 2020 Local Government Survey<ul style="list-style-type: none">- Preferred & Optimal Locations• ZEVIP Survey<ul style="list-style-type: none">- Optimal Locations	 <ul style="list-style-type: none">• Transit Oriented Developments• Priority Funding Areas• Intermodal Facilities• Substations• Bike Lanes• Transit Stops• Registered EVs

Other Considerations

- Innovations
 - Solar
 - Storage
 - Mobile Charging
- Cost
 - More than 20% Match
- Amenities
 - Restrooms
 - Food/Dining/Retail
 - Lighting
 - Other Services
- Supports community charging & greater deployment efforts



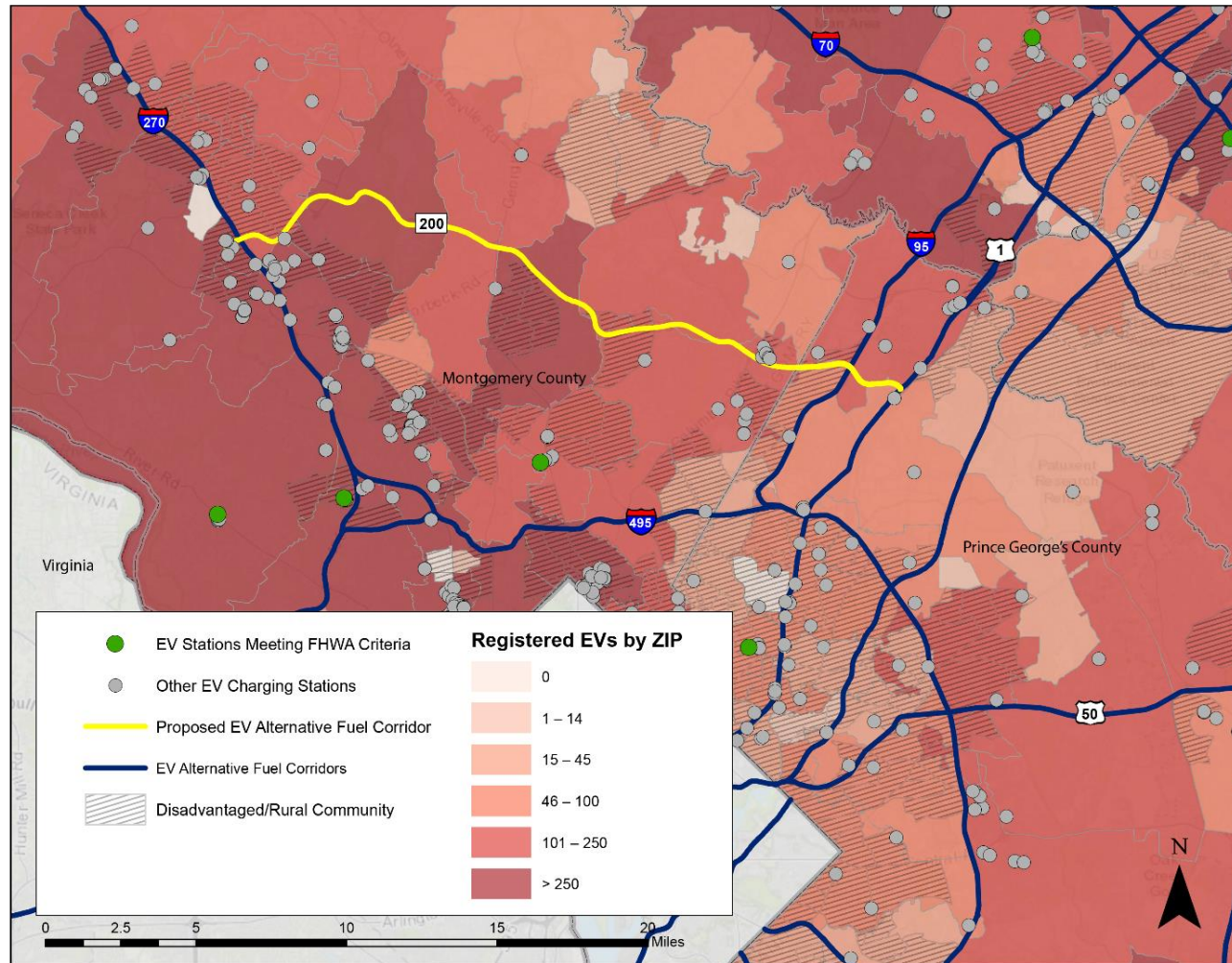
Fully solar-powered EV charging station deployed for CALtrans.



Alternative Fuel Corridor Nominations

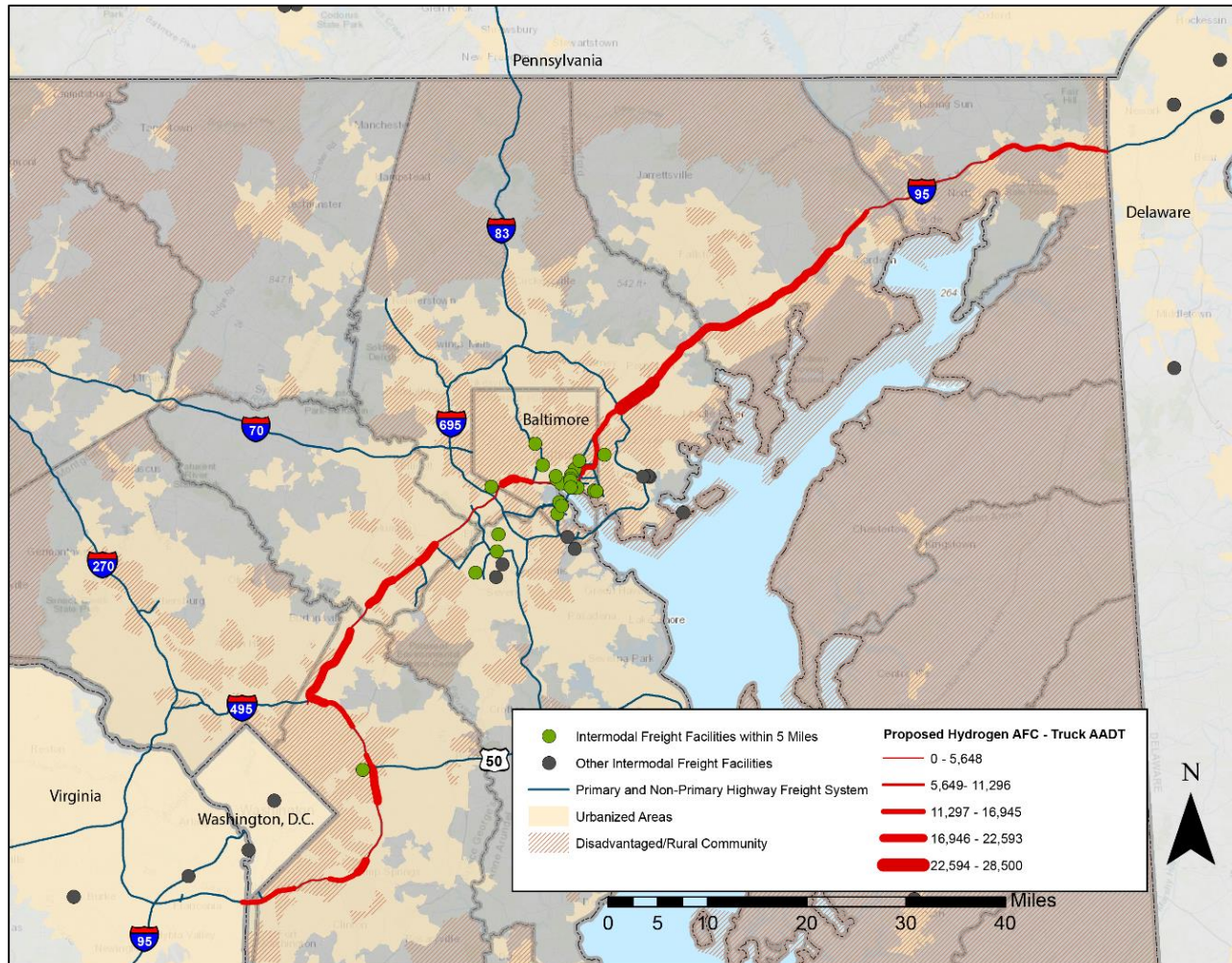
Dan Janousek, MDOT

EV AFC: ICC/MD 200



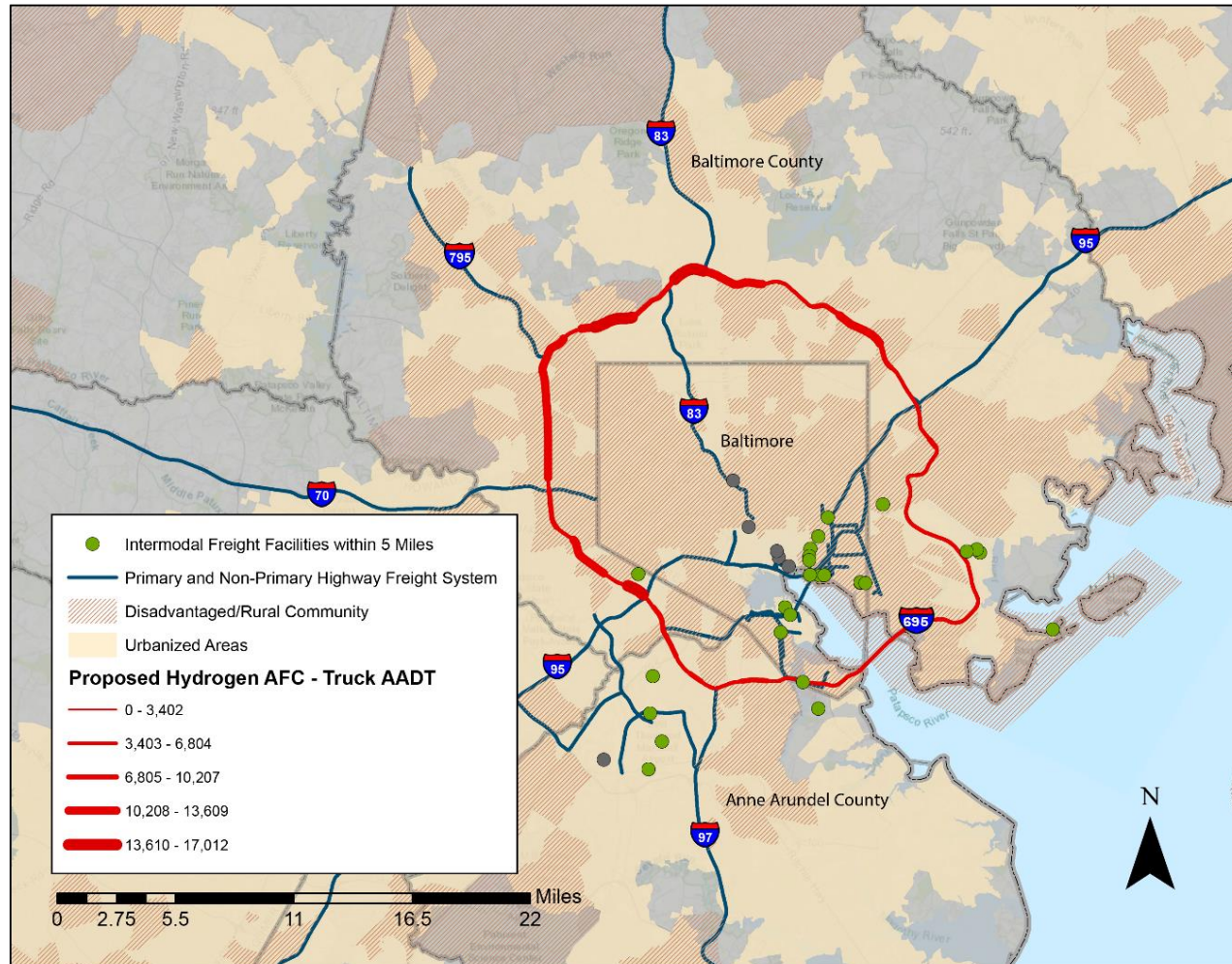
- Nominated as: Corridor-Pending
- Currently no EV charging stations meeting FHWA Criteria
- 3 ZIP Codes > 250 EVs Registered
- Passes through 5 census tracts identified in MDOT's draft NEVI Plan as rural or disadvantaged community

Hydrogen AFC: I-95



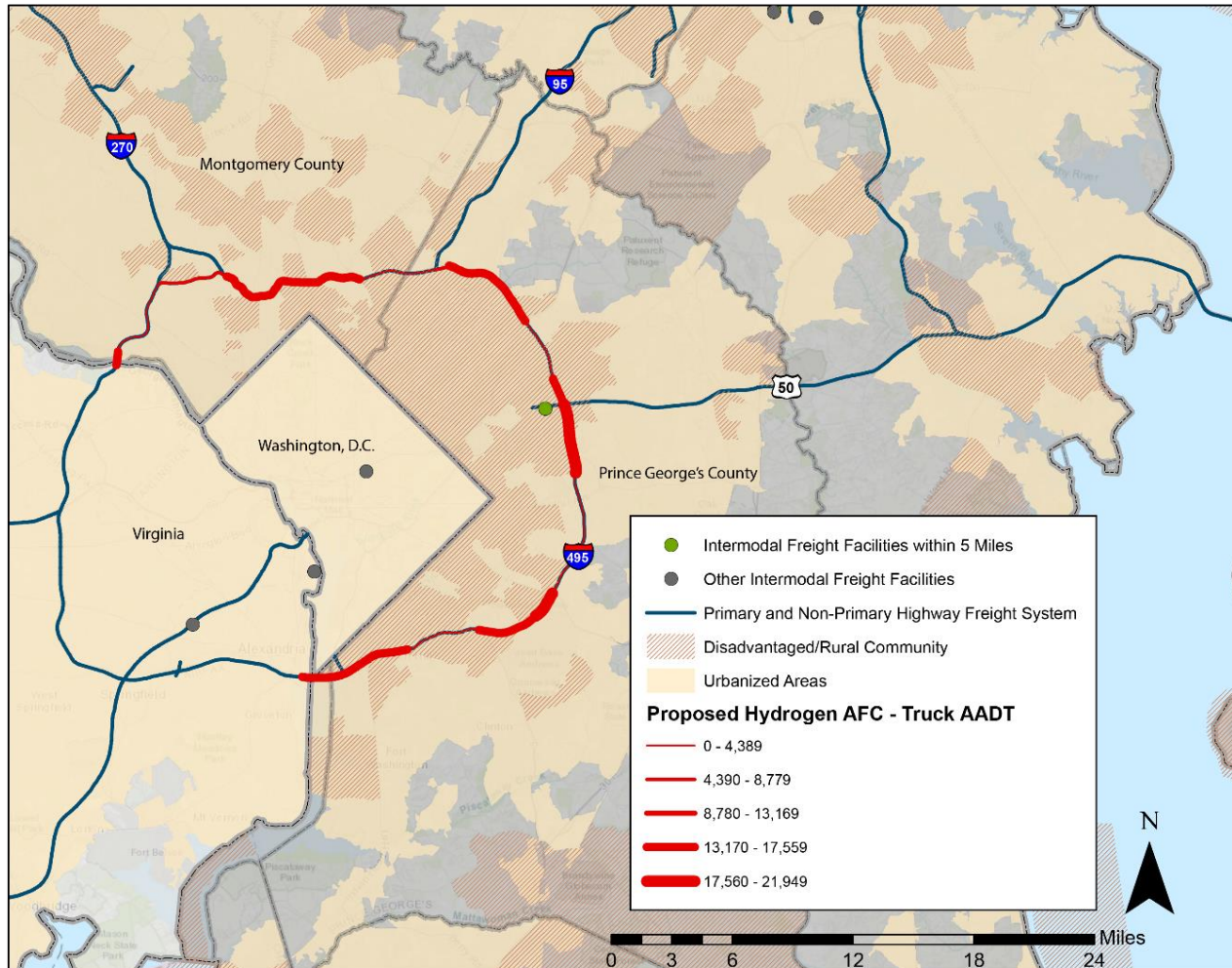
- Nominated as: Corridor-Pending
- Currently no hydrogen infrastructure
- Connection to 25 Intermodal Freight Facilities
- Passes through 39 census tracts identified in MDOT's draft NEVI Plan as rural or disadvantaged community
- Two segments identified as having some of the highest truck volumes
- Tunnel safety issues are not a barrier for consideration

Hydrogen AFC: I-695



- Nominated as: Corridor-Pending
- Currently no hydrogen infrastructure
- Connection to 26 Intermodal Freight Facilities
- Passes through 27 census tracts identified in MDOT's draft NEVI Plan as rural or disadvantaged community
- One segment identified as having one of the highest truck volumes

Hydrogen AFC: I-495



- Nominated as: Corridor-Pending
- Currently no hydrogen infrastructure
- Connection to 1 Intermodal Freight Facility
- Passes through 4 census tracts identified in MDOT's draft NEVI Plan as rural or disadvantaged community

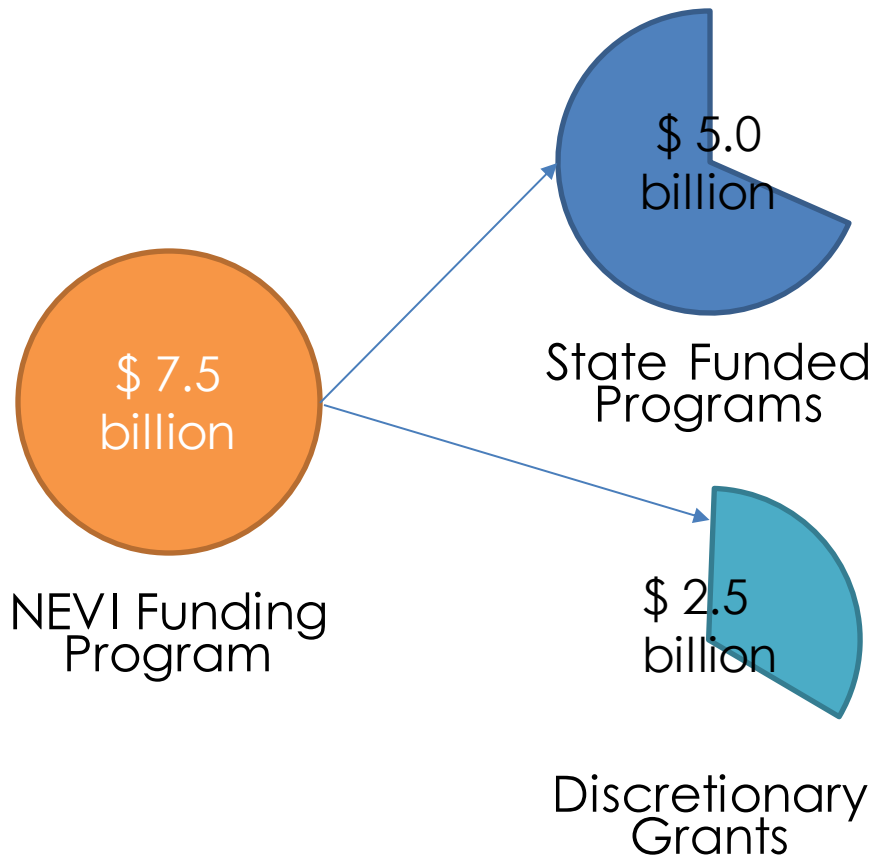
A stylized graphic in the top right corner showing two hands, one red and one white, holding a globe. The globe is composed of yellow, grey, and red segments. The hands are rendered in a simple, blocky style.

Federal Funding Opportunities

Leo Sawada, Jacobs

NEVI Formula Program

<https://evplan.mdot.maryland.gov/>



- \$5.0 billion State Funded Programs
 - 10% discretionary grants to fill gaps in national network
- ~\$60 M Requires approved plan

FY22 ————— Over the next five years —————> FY26

- \$2.5 billion in discretionary grants targeting rural/underserved communities

Funding: Federal Discretionary Programs

Grants to be launched by November 15, 2022

- Discretionary Grant Program for Charging and Fueling Infrastructure
- National Alternative Fuel Corridor
- Community Alternative Fuel Infrastructure Grant

Eligible entities include states, metropolitan planning organizations, local governments, political subdivisions, and tribal governments.



Funding: Other Federal Discretionary Programs

- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- Infrastructure for Rebuilding America (INFRA) Grant Program
- Advanced Transportation and Technologies and Innovative Mobility Deployment
- Rural Surface Transportation Grant Program
- Reduction of Truck Emissions at Port Facilities Program
- Clean School Bus Program
- Ferries Electric or Low-Emitting Ferry Pilot Program
- Low-No Emissions Program
- Electric Drive Vehicle Battery Recycling And 2nd Life Apps
- Low or No Emission Vehicle Component Assessment Program
- Diesel Emission Reduction Act (DERA)
- Buses and Bus Facilities Program



<https://afdc.energy.gov/laws>

Hydrogen Funding Opportunities

- Clean School Bus Program
- National Alternative Fuels Corridors
- Hydrogen Demonstration Project Grants
- Alternative Fuel Corridor (AFC) Grants
- Alternative Fuel Vehicle (AFV) Grants
- Community Alternative Fuel Infrastructure Grants
- Port Infrastructure Development Program (PIDP)
- Low and Zero Emission Ferry Program





2022 Legislative Session

David Proctor, Sharp & Company

2022 Legislative Session Recap

ZEEVIC's Supported Bills - Summary

Bill #	Bill Title	Status
SB0146	Vehicle Laws - Plug-In Electric Drive Vehicles - Reserved Parking Spaces	Passed
HB0157	Vehicle Laws - Plug-In Electric Drive Vehicles - Reserved Parking Spaces	Passed
HB0696	Public Utilities – Electric School Bus Pilot Program	Passed
HB0829/SB0687	MDE – Zero-Emission Medium- and Heavy-Duty Vehicles (MHDVs) – Regulations (Zero-Emission Truck Act of 2022)	Failed
HB0894	Transportation Electrification and Modernization (TEAM) Act	Failed
HB1146	Residential Construction – <i>EV Charging</i>	Failed
HB1391	Clean Cars Act of 2022	Passed

Other ZEV – Related Bills Summary

Bill #	Bill Title	Status
HB0010/SB0061	Maryland Transit Administration - Conversion to Zero-Emission Buses (Zero-Emission Bus Transition Act Revisions)	Passed
HB0046/SB0104	Vehicle Emissions Inspection Program – Not Subject to Inspection – Fee	Failed
HB0060/SB0126	Environment – New Motor Vehicles – Pollution Fee	Failed
HB0094	State Vehicle Fleet - Conversion to Zero-Emission Passenger Cars and Other Light-Duty Vehicles	Failed
HB0507/SB0924	Environment - Electric Vehicle Charging Infrastructure - Environmental Justice Considerations	Failed
HB0782	Vehicle Laws - Plug-In Electric Drive Vehicles - Reserved Parking Spaces	Withdrawn (2/21)
HB0831	Reducing Greenhouse Gas Emissions - Commercial and Residential Buildings	Failed
HB0835	Retail Service Stations – New Construction – Setbacks and Electric Charging Stations	Withdrawn (3/17)
HB1079/SB0922	Vehicle Emissions Inspection Program - Standards, Requirements, and Application	Failed
HB1314	Vehicle Laws - Pilot Program to Evaluate Alternative Registration Plates and Cards	Failed
SB0627	State Building Code - Electric Vehicles	Failed

2022 Legislative Session Recap

- Prohibits non EVs from stopping, standing, or parking in designated spots. Establishes a \$100 fine ([SB0146](#))
- Requires vehicles to be plugged in and charging in designated spaces ([HB0157](#))
- Establishes an electric school bus pilot program with participating school systems ([HB0696](#))
- Establishes Medium-Duty and Heavy-Duty Zero-Emission Vehicle Grant Program. Qualified EV/FCEVs not exceeding \$50,000 may apply for an excise tax credit of up to \$3,000 ([HB1391](#))
- MTA to plan and report annually on the transit bus fleet ZEV conversion ([HB0010/SB0061](#))



Social Media, MarylandEV, and Outreach Updates

David Proctor, Sharp & Company

Potential In Person Outreach Events



Baltimore Washington One Carnival

- July 9-10, 2022

Washington County Fair

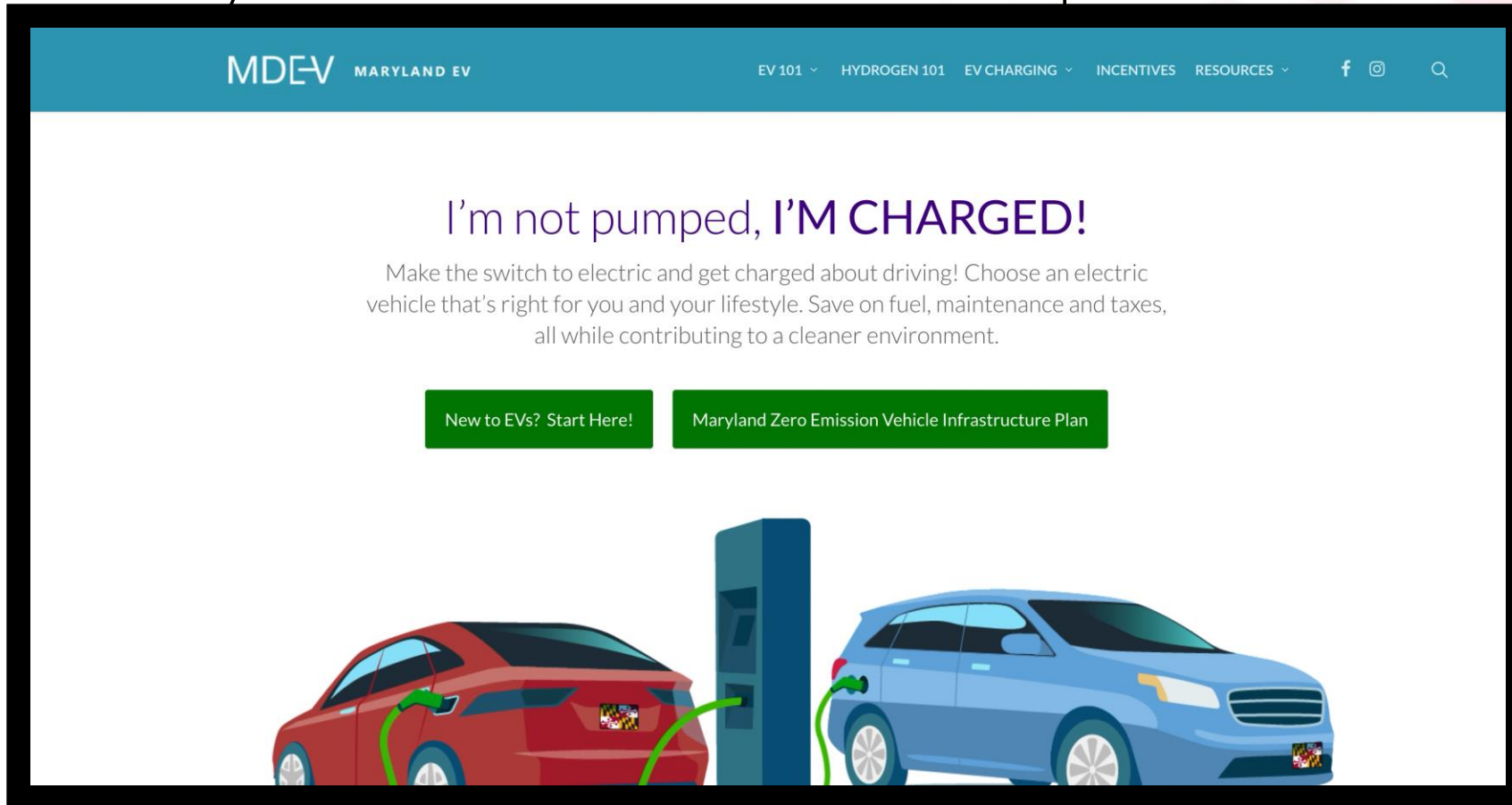
- July 16-23, 2022

Wicomico County Fair

- August 20-22, 2022

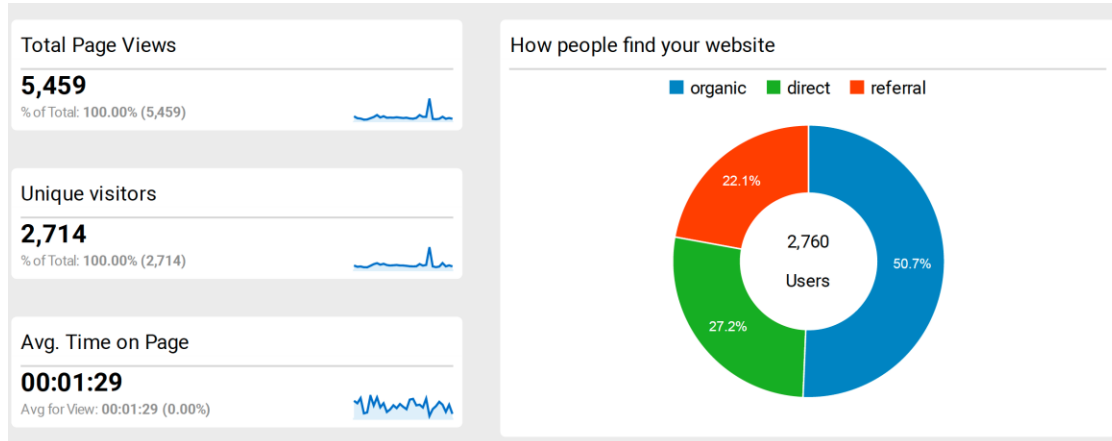
MarylandEV.org Updates

- Refreshed Home Page
- Links to EV Journey and ZEVIP
- MD EV Driver Testimonials
- New Graphics, Links, and Resources

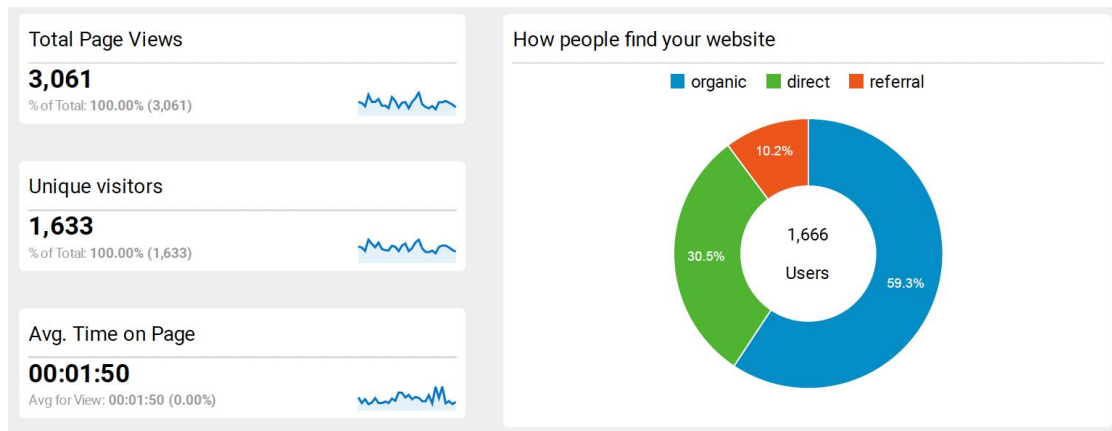


MarylandEV Website Analytics

March (2,000 more visits)



April



March – April 2022

Top Pages Visited:

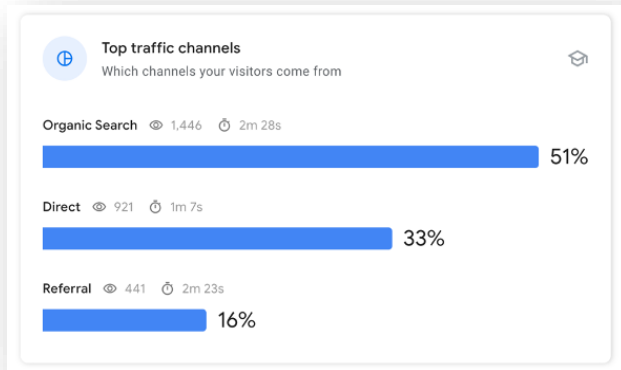
1. Incentives: 3,530
2. Homepage: 2,725
3. Charging: 439
4. The-ev-journey: 420
5. Charging/home-installation: 243

Top Referral Sources:

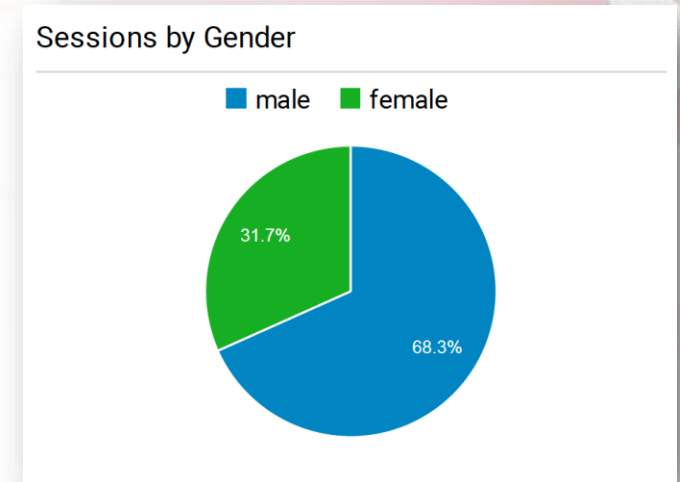
1. BGE: 104
2. Pepco: 58
3. evplan.mdot.Maryland.gov: 44
4. First Energy Corp: 42
5. MDOT: 38
6. Maryland EV Journey: 27
7. Social Media: 23
8. Marylandtesla.com: 7

MarylandEV – What Analytics Tell Us

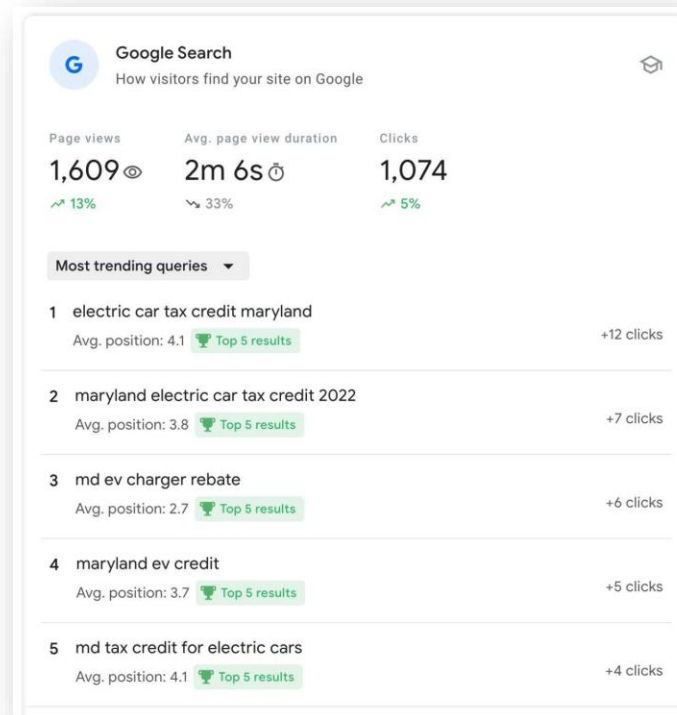
How are Marylanders finding us?



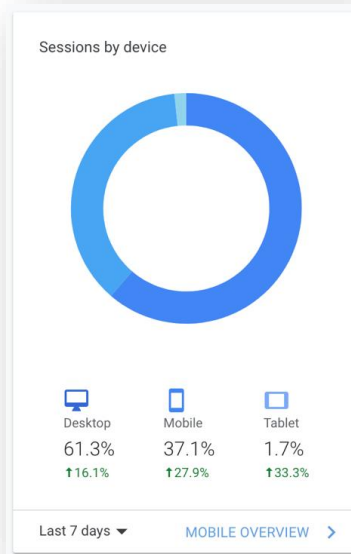
Who is searching in Maryland?



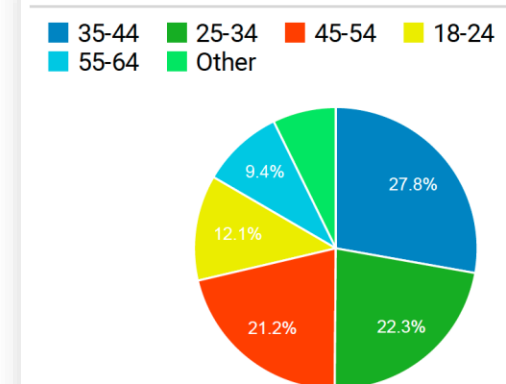
What search keywords?



What devices do they use?



Sessions by Age



Maryland EV Social Media Post Examples

March 2022

Maryland Electric Vehicle
Published by Sharp & Company · March 23 ·

The Maryland Department of Transportation (MDOT) and the Maryland Energy Administration (MEA) will have its first stakeholder and community webinar on the Maryland Zero Emission Vehicle Infrastructure Planning (ZEVIP) efforts.

Thursday, March 31, 2022 from 1:00-2:30 PM.

Submit questions to presenters and register here:
<https://forms.office.com/Pages/ResponsePage.aspx...>

Please check the link below for more information about the Maryland ZEVIP:
<https://evplan.mdot.maryland.gov/>
#MarylandEV #EV

Maryland.gov MDOT MARYLAND DEPARTMENT OF TRANSPORTATION



Maryland Zero Emission Vehicle Infrastructure Plan (ZEVIP) Webinar



Maryland Electric Vehicle
Published by Sharp & Company · March 28 ·

The Town of Sykesville has purchased a Tesla Model Y as the newest addition to its police patrol fleet. ⚡

Check out CleanTechnica's Q&A with Sykesville Police Department Chief Michael Spaulding to learn more:
<https://cleantechnica.com/.../tesla-model-y-selected-for.../>
#MarylandEV #EV



Maryland Electric Vehicle
Published by Sharp & Company · March 31 ·

To create a cleaner and greener transportation sector, the Maryland Energy Administration has awarded \$1.9 million to fleet operators throughout the state for the first round of the 2022 Clean Fuels Incentive Program. 🚗♻️

Notable award recipients include Highland Electric Fleets and Swann Transportation, who will purchase and deploy electric school buses on behalf of the Baltimore City and White Plains school systems respectively.

Read more: <https://ngtnews.com/1-9-million-awarded-to-fleet...>
#MarylandEV #EV



Maryland EV Social Media Post Examples

April 2022

Maryland Electric Vehicle
Published by Sharp & Company · April 4 ·

The Montgomery County GreenFest will take place on April 23 at Brookside Gardens. There will be an electric vehicle car show featuring the latest models and technology!

Visit the Montgomery County GreenFest website to learn more <https://montgomerycountygreenfest.org/>.

#MarylandEV #EV




The logo for Montgomery County GreenFest features the words "Montgomery County" in a blue, sans-serif font at the top. Below it, the word "GREEN" is written in large, bold, green letters with a leaf-like texture. Underneath "GREEN", the word "FEST" is written in white letters on a blue banner. The entire logo is flanked by green leaves.

Maryland Electric Vehicle
Published by Sharp & Company · April 7 at 5:12 PM ·

As gas prices rise, search interest in electric and hybrid vehicles has risen more than 300% in the last month. Maryland ranked 9th for states with the most web searches for electric vehicles in the U.S.

If you're interested in making the switch to electric visit our website at marylandev.org or check out the full article here: <https://www.localdvm.com/.../ga-price-searches-for.../>

#MarylandEV #EV



A photograph of a modern electric vehicle charging station. The station is white and green, with two charging cables hanging from it. It is located outdoors on a paved area next to a grassy field. In the background, there is a tall brick building and a clear blue sky.


Maryland Electric Vehicle
Published by Sharp & Company · April 25 at 5:33 PM ·

Have you heard about Potomac Edison's EV Driven Program? Right now, **Potomac Edison** customers can get a \$300 rebate on qualified Level 2 Smart Chargers from the following manufacturers:

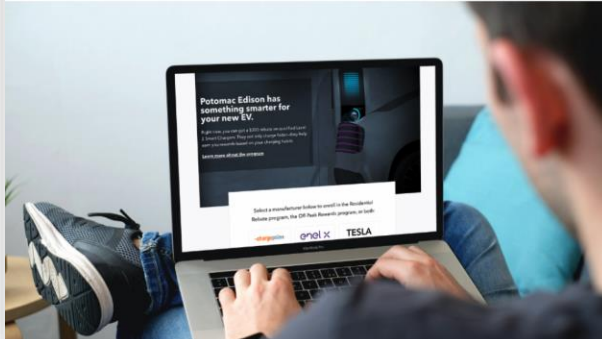
- ⚡ Tesla
- ⚡ ChargePoint
- ⚡ Enel X

Ongoing rewards for charging during off-peak hours are also available. Learn more at https://evdrivenpe.com/?utm_source=MEV...

#MarylandEV #EV



The logo for Potomac Edison's EV Driven program. It features the Potomac Edison logo (A FirstEnergy Company) on the left and the "EV EVDRIVEN" logo on the right. The "EV" is in large green letters, and "EVDRIVEN" is in smaller green letters below it.

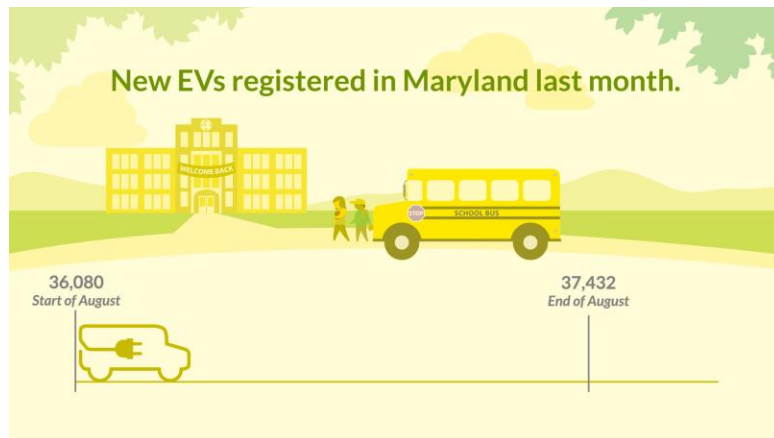


A photograph of a person sitting at a desk, looking at a laptop. The laptop screen displays a website with text about Potomac Edison's EV Driven Program. The person is wearing a blue shirt and a black and white sneaker.

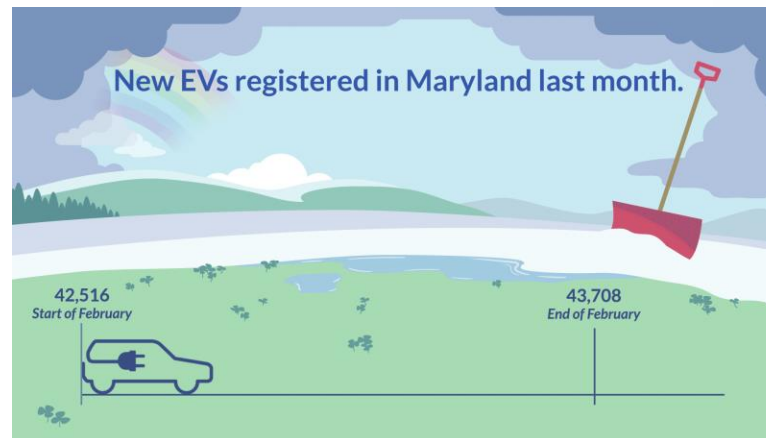
Maryland EV Social Media Registration Series

- Highlighting new monthly EV registrations from the previous month
- Shared on Maryland EV social media platforms
- Encourages the public to join the growing trend

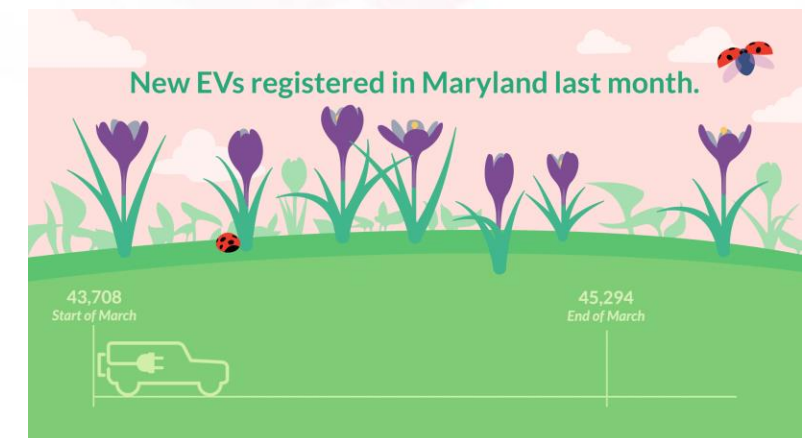
September



March



April





Utility Updates

BGE, PHI, SMECO, Potomac Edison

BGE

- EVSE Pilot Program Update
 - Residential: 1,862
 - Multifamily: 145 ports
 - Public: 208 live, 223 in progress
 - TOU Rate: 955 participants
- Events & Outreach
 - 25 EVs for Lyft delivered. Expected to be available to drivers on 6/1/22
 - Planning a Lyft event in Johnston Square in September
 - Potentially doing Trucks for Tots with the Maryland Zoo – October
 - Drive Electric Week events - September

PHI

MD EVsmart Incentive and Rebate Programs

Program	Jurisdiction	Program Target	Current Enrollment/Installations
Residential Rebate	Pepco MD	750	750
	DPL MD	250	68
R-PIV TOU Rate	Pepco MD	No Limit	330
	DPL MD	No Limit	5
Residential Plug-in Vehicle TOU (PIV)	Pepco MD	100	2 (41 applicants in review pipeline)
	DPL MD	37	2 (5 applicants in the review pipeline)
Multi-Dwelling (MDU) Incentive	Pepco MD	100	12 (20 ports installed; 3 applicants in review pipeline)
	DPL MD	25	0 (3 applicants in review pipeline)
Off Peak/Off Bill Rebate	Pepco MD	250	250
	DPL MD	75	32

MD EVsmart Public Chargers – In Service

	L2 Charger	DC Fast Charger	Total
Pepco	79	3	82
DPL	64	5	69
Total	143	8	151

MD EVsmart Pipeline Status – Public Chargers

	Sites	Chargers
Pre-Construction / In Construction	6	17
Engineering	36	118
Total	42	135

- Events & Outreach
 - The PHI MD EVsmart program intends to request additional marketing budget through the July 2022 semi-annual report to support targeted outreach.

SMECO

- EVSE Pilot Program Update
 - 25 EVSE Installed (22 Level 2, 3 DC Fast)
 - Launched whole-house TOU rates in February
- Events & Outreach
 - EV Meet & Greet on May 14th at LaPlata's Farmer's Market

Potomac Edison

- EVSE Pilot Program Update
 - Residential Rebates: 224 paid out through 4/30/22
 - Multifamily: 6 pending approval
 - Public: 28 stations, 20 Level 2 and 8 DC Fast Chargers
 - TOU Rate: 382 participants as of 5/16/22
- Events & Outreach
 - Promoting the inclusion of Tesla in Rebate and Off-Peak Rewards programs on PlugShare.com
 - Q2 2022: ribbon cutting at MUD installation



State Agency Updates

MDE Program Updates

Volkswagen Settlement Updates: EVSE Infrastructure Programs

- Phase I
 - First Level 3 project has been completed Valley Park Commons (Hagerstown)
 - Event was held on April 25th
 - Four Level 3 Chargers (two 100 kW chargers, two that power share 350 kW)
- Phase II
 - Proposals were due April 15th
 - MDE received 77 proposals (47 ECGP, 30 CAGP)
 - Approx. \$12.6 million in total requested funds
 - Observations:
 - Much better geographic distribution than Round 1
 - Power levels are higher than Round 1

MEA Program Updates

- \$1.8M FY22 EVSE Rebate budget depleted, totaling 2,120 chargers.
 - \$1,130,530 for 1,927 residential chargers
 - \$669,464 for 193 commercial chargers
 - Funding depleted first week of April, will continue to receive applications. Will process out of FY23 funds in the order received.
- Clean Fuels Incentive Program (CFIP)
 - FY22 Round 1- \$630K total award to 5 applicants for 10 fleet EVs.
 - Notable- Highland, 4 electric school buses for Baltimore City.
 - Closed Round 2 on 4/20- \$6.3M in total grant requests.
 - 8 applications for 42 EVs- light duty, shuttle buses, delivery step-vans, concrete mixer trucks, Class 8 tractors. 1 application for 4 FCEVs.
 - Evaluations ongoing, aim to make awards and execute grant agreements by mid-June.
- Clean Fuels Technical Assistance (CFTA) Program
 - Task order to move FY22 round forward executed, will open soon.

PC44 EV Work Group Summary Q1 2022 and Other Commission Activities

- Fleet Subgroup to file report by June 30, 2022
- PC44 EV Work Group to file reliability recommendations by 8/1/2022
- Continuing work on commercial rate design, EVSE metering, and other issues.
- Utility reports for Q1/Q2 2022 to be filed August 1, 2022

Additional State Agencies

- MDP
- Commerce
- DGS

Closing Remarks – Deputy Secretary Lewis

2022 Meeting Schedule:

- July 20, 2022
- September 21, 2022
- November 16, 2022