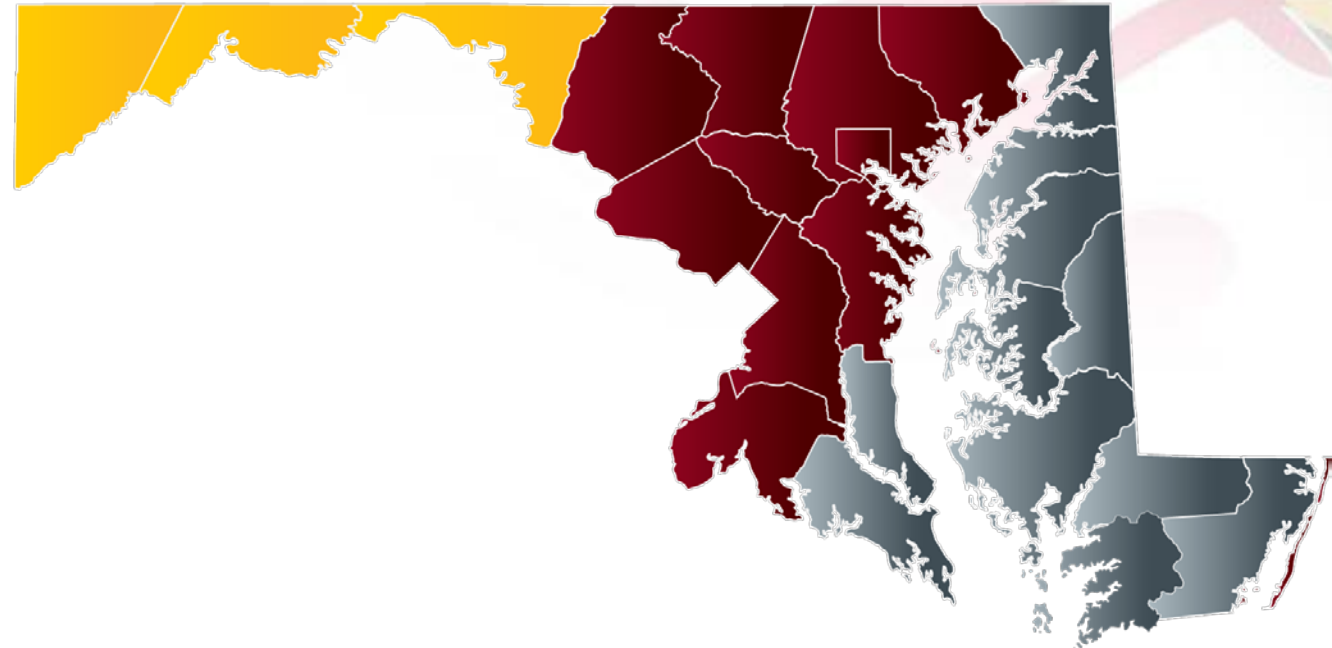# Maryland ZEV Collaboration Webinars

Western Region Webinar

Tuesday, October 6, 2020

Housekeeping

➢ This meeting is being recorded
➢ Please mute your microphone
➢ Tech difficulties? Add comment in chat or text **206-979-8721**
➢ Discussion
    ➢ Add questions and comments to the chat
    ➢ Time: one minute per participant
    ➢ Unmute yourself (via phone press *6)
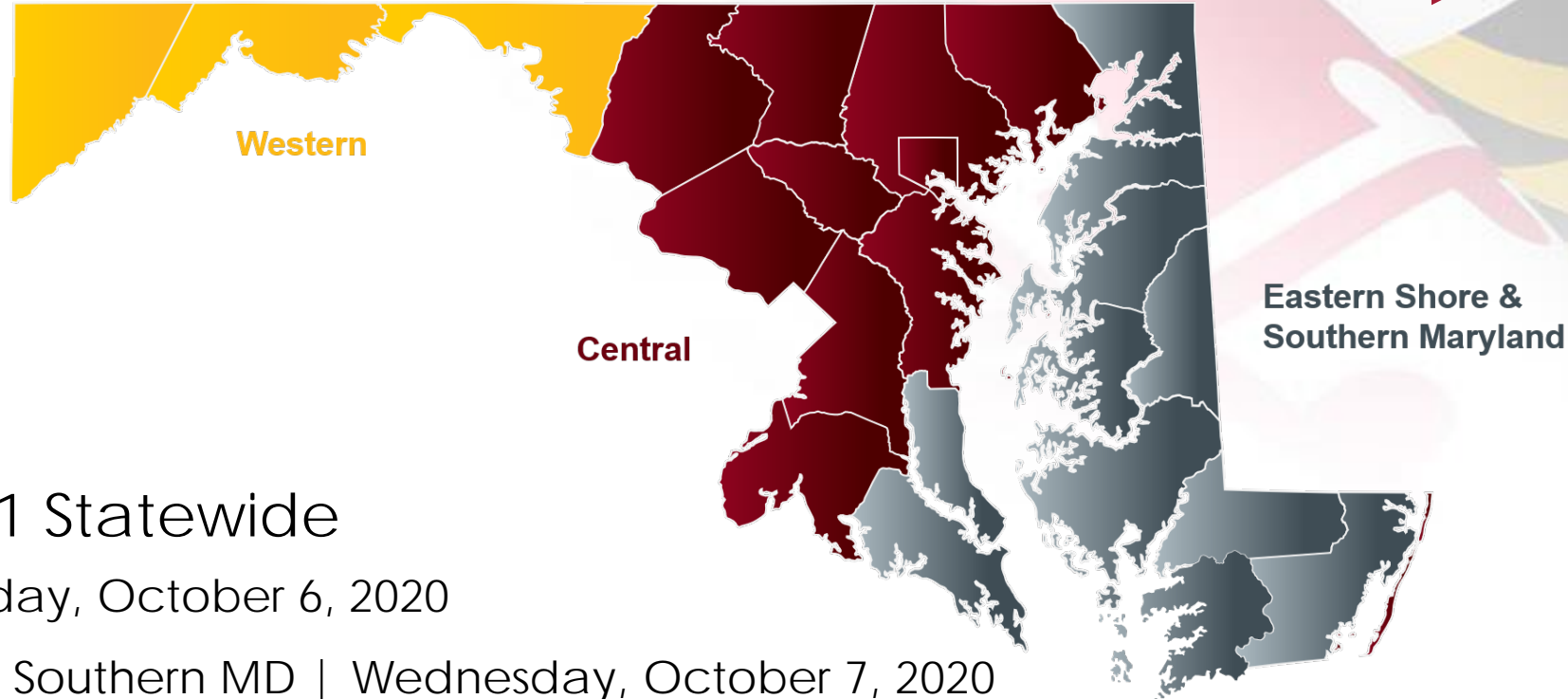   ➢ Identify yourself and your county

Mark your calendar:
Statewide webinar October 28th 2-3PM

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION.

Agenda

- Goals & Overview

- Survey Results
  Group Feedback / Discussion

- Zero Emission Vehicles (ZEV) in Maryland and Nationally
  - Tim Shepherd, MDE
  - Mike Jones, MEA
  - Colleen Turner, MDOT
    Group Feedback / Discussion

- Recap & Next Steps

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

Maryland ZEV Collaboration Webinars

Western

Central

Eastern Shore & Southern Maryland

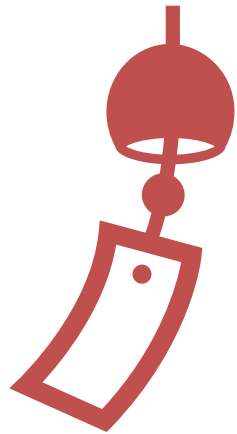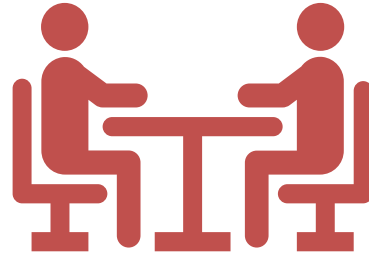## Forum

Webinars: 3 Regional + 1 Statewide

» Regional: Western | Tuesday, October 6, 2020

» Regional: Eastern Shore & Southern MD | Wednesday, October 7, 2020

» Regional: Central | Thursday, October 8, 2020

» **Statewide | Wednesday, October 28, 2020**

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Goals for Today

Share

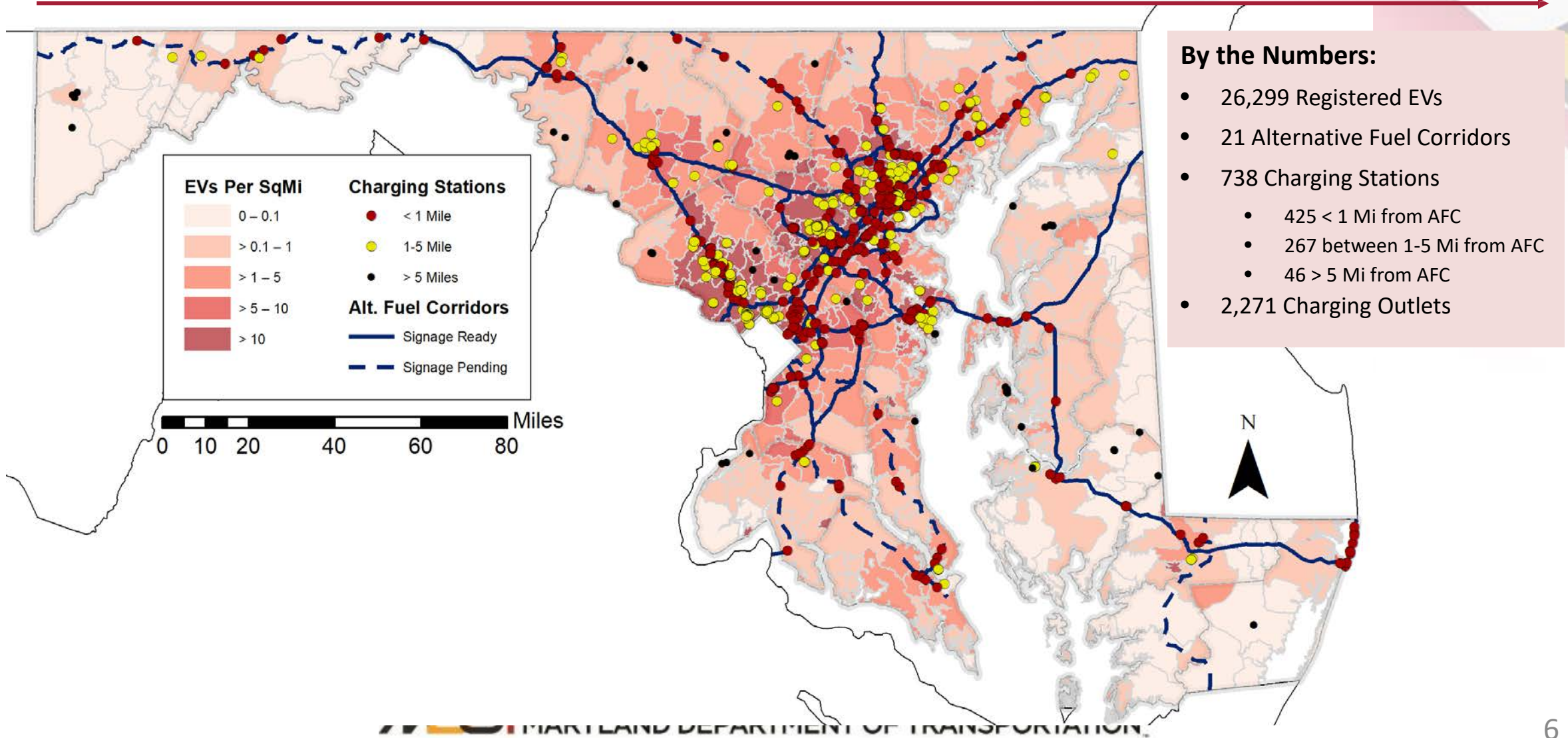Results from MDOT ZEV / Emerging Technologies Surveys.

Communicate

Maryland's progress and share opportunities to align activities and collaborate.

Learn

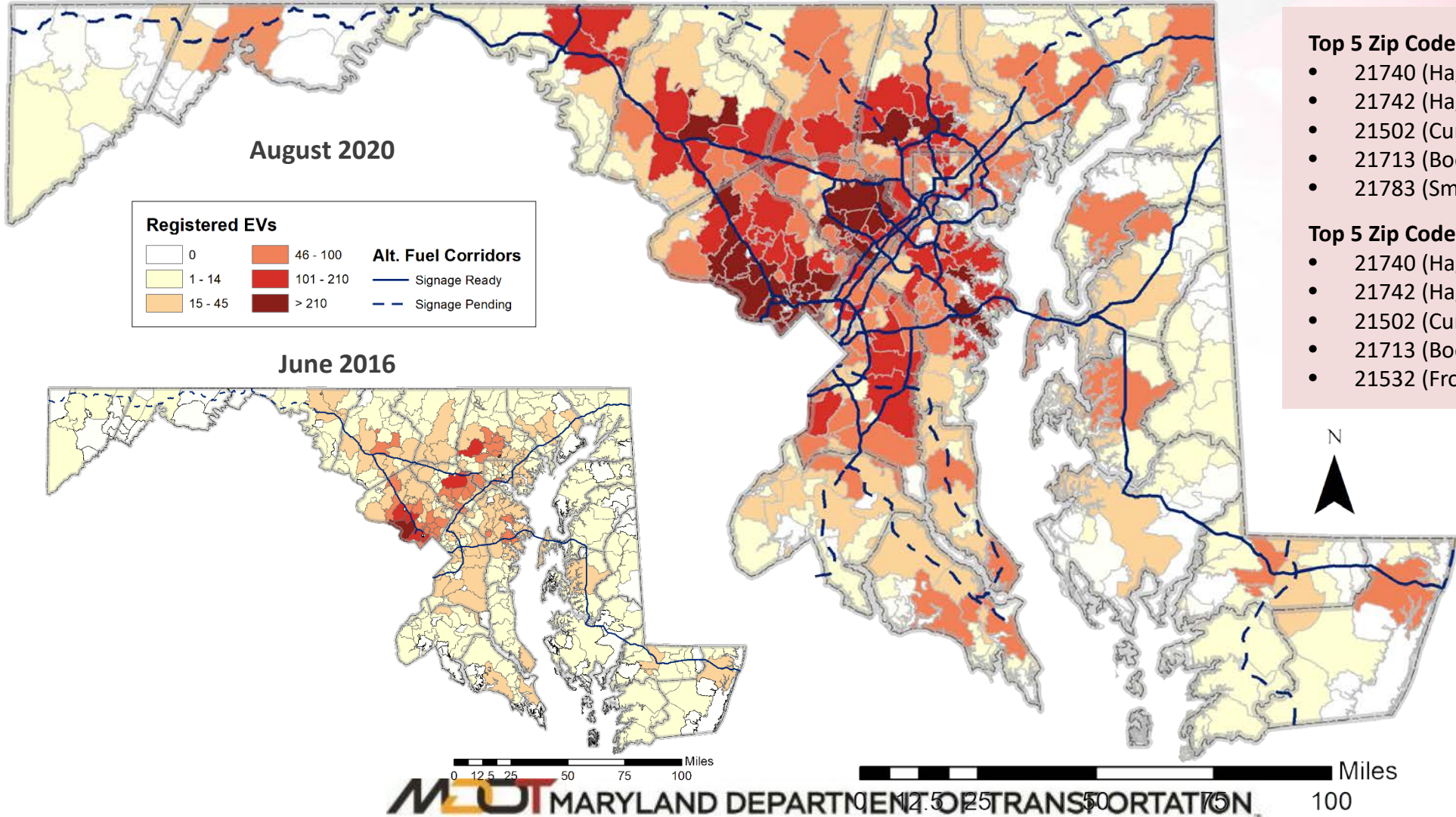About local challenges and prospects in ZEV and related technologies.

MARYLAND DEPARTMENT OF TRANSPORTATION

Current Infrastructure Statewide

By the Numbers:

- 26,299 Registered EVs
- 21 Alternative Fuel Corridors
- 738 Charging Stations
  - 425 < 1 Mi from AFC
  - 267 between 1-5 Mi from AFC
  - 46 > 5 Mi from AFC
- 2,271 Charging Outlets

Legend:

EVs Per SqMi
- 0 – 0.1
- > 0.1 – 1
- > 1 – 5
- > 5 – 10
- > 10

Charging Stations
- < 1 Mile
- 1-5 Mile
- > 5 Miles

Alt. Fuel Corridors
- Signage Ready
- Signage Pending

Miles 0 10 20 40 60 80

Current Infrastructure Western MD

August 2020

June 2016

Registered EVs
- 0
- 1 - 14
- 15 - 45
- 46 - 100
- 101 - 210
- > 210

Alt. Fuel Corridors
- Signage Ready
- Signage Pending

Top 5 Zip Codes August 2020:
- 21740 (Hagerstown) - 117
- 21742 (Hagerstown) - 101
- 21502 (Cumberland) - 46
- 21713 (Boonsboro) - 22
- 21783 (Smithsburg) - 16

Top 5 Zip Codes June 2016:
- 21740 (Hagerstown) – 28
- 21742 (Hagerstown) - 25
- 21502 (Cumberland) – 10
- 21713 (Boonsboro) – 6
- 21532 (Frostburg) - 5

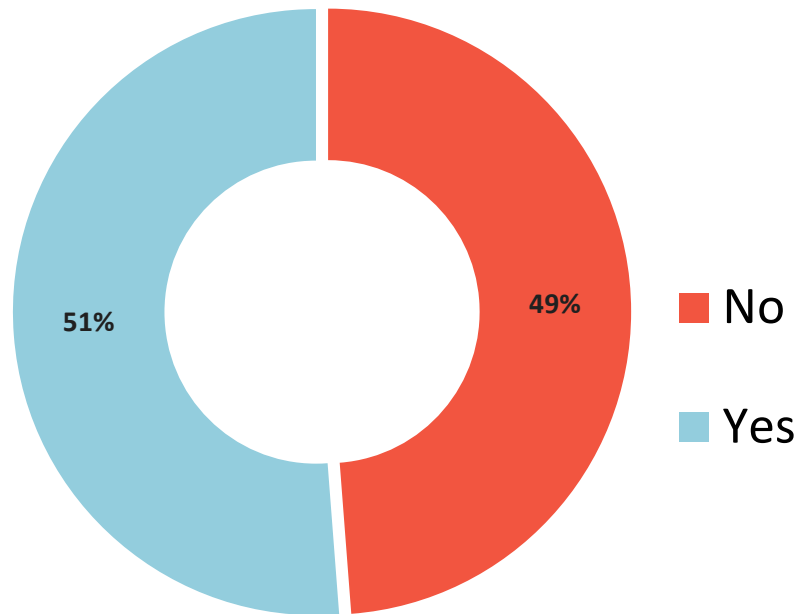MARYLAND DEPARTMENT OF TRANSPORTATION

Local Government Outreach Survey

Colleen Turner, MDOT TSO

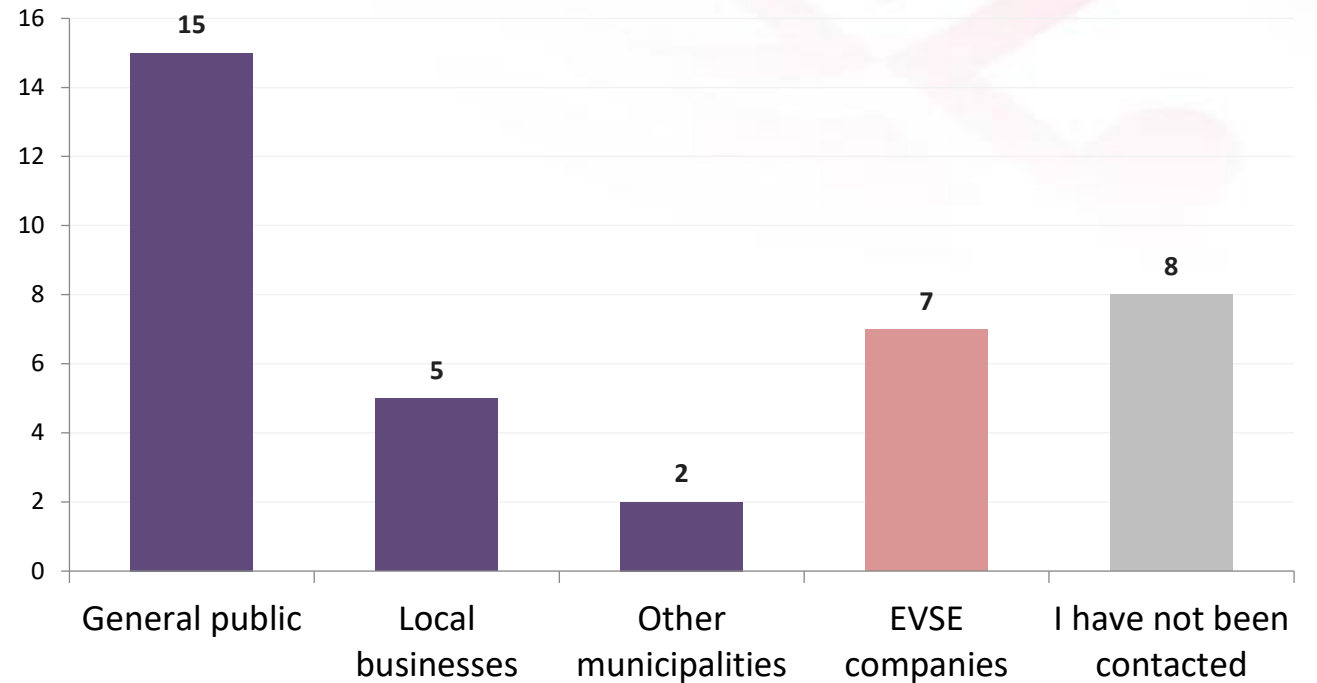# MetroQuest EV Charging Survey

51 Respondents

Have you received calls/emails about the need for more EV charging locations?

51% Yes
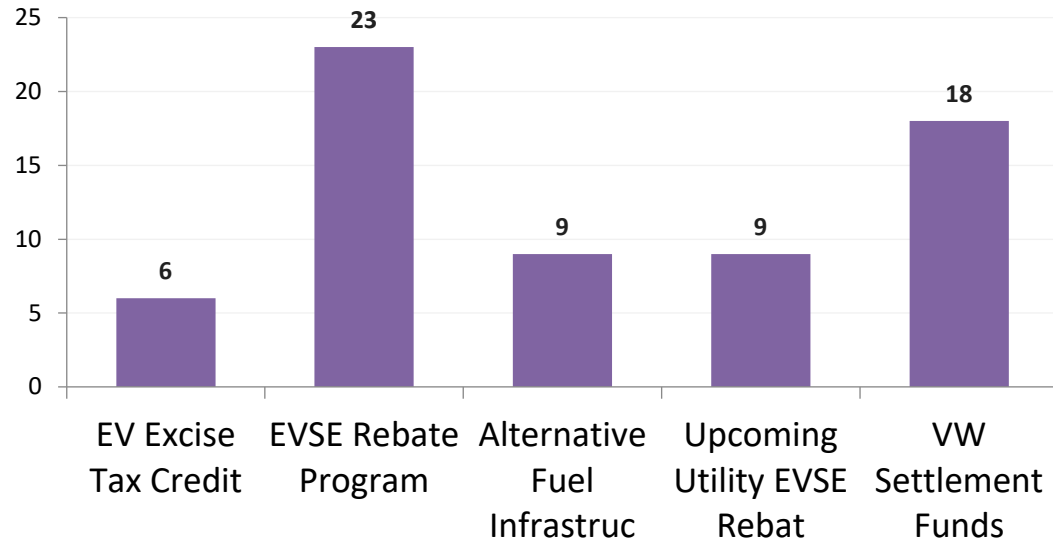49% No

If so, who has contacted you?

Category	Count
General public	15
Local businesses	5
Other municipalities	2
EVSE companies	7
I have not been contacted	8

MARYLAND DEPARTMENT OF TRANSPORTATION

MetroQuest EV Charging Survey

Awareness & Planning Efforts

Select all of the Maryland funding programs for EVs or EVSEs that you are aware of and/or have been communicating to your community:

Are you planning on completing an EV infrastructure or EVSE plan in the future?

Bar chart values:
- EV Excise Tax Credit: 6
- EVSE Rebate Program: 23
- Alternative Fuel Infrastruc: 9
- Upcoming Utility EVSE Rebat: 9
- VW Settlement Funds: 18

Donut chart:
- Maybe: 49%
- No: 24%
- Yes: 27%

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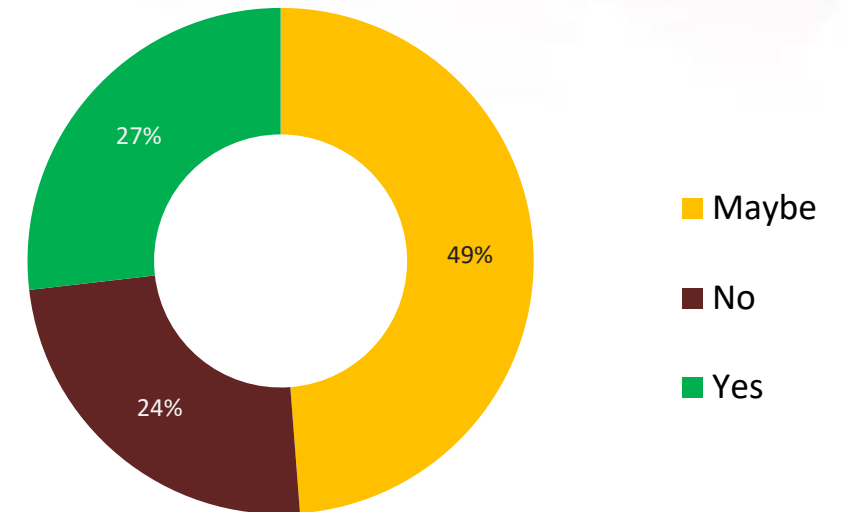
MetroQuest EV Charging Survey

Local Government Outreach Survey

Challenges to EV Implementation Ranked
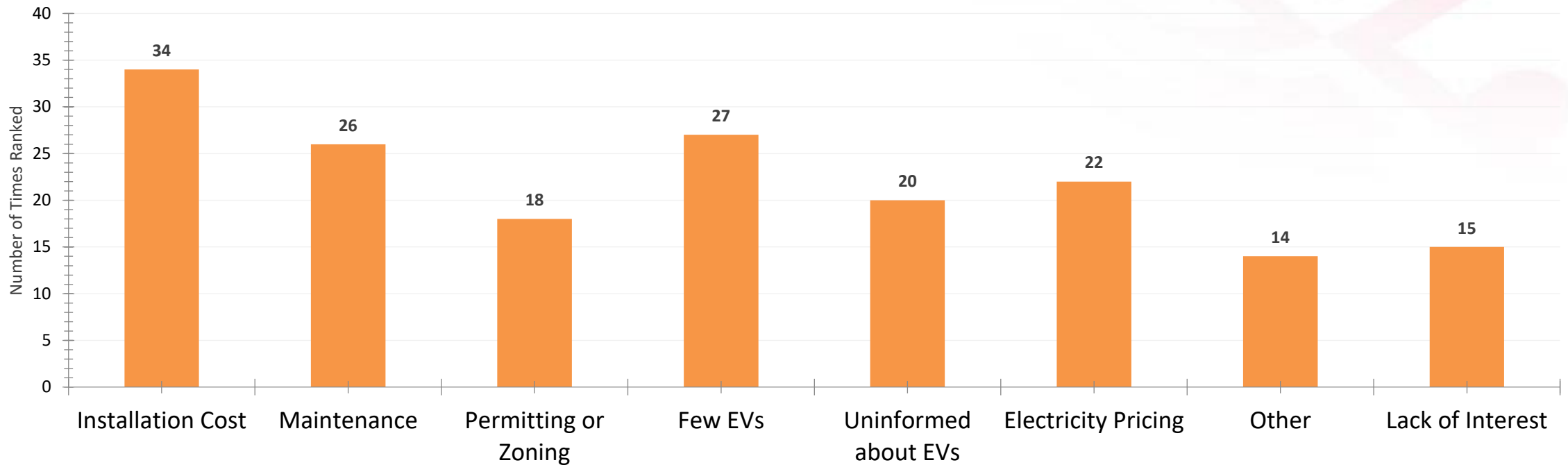
MetroQuest EV Charging Locations
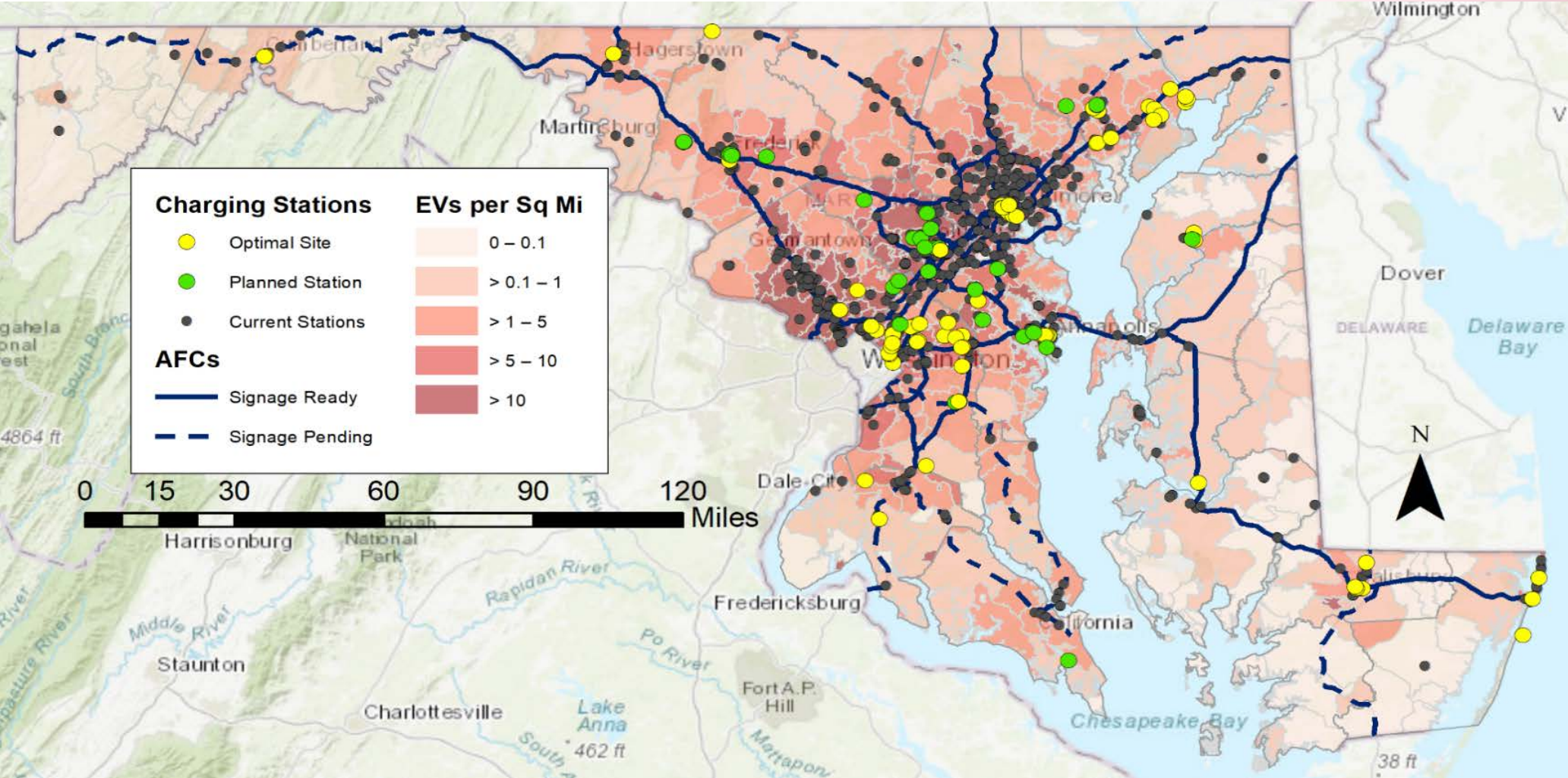
Current Infrastructure - Western
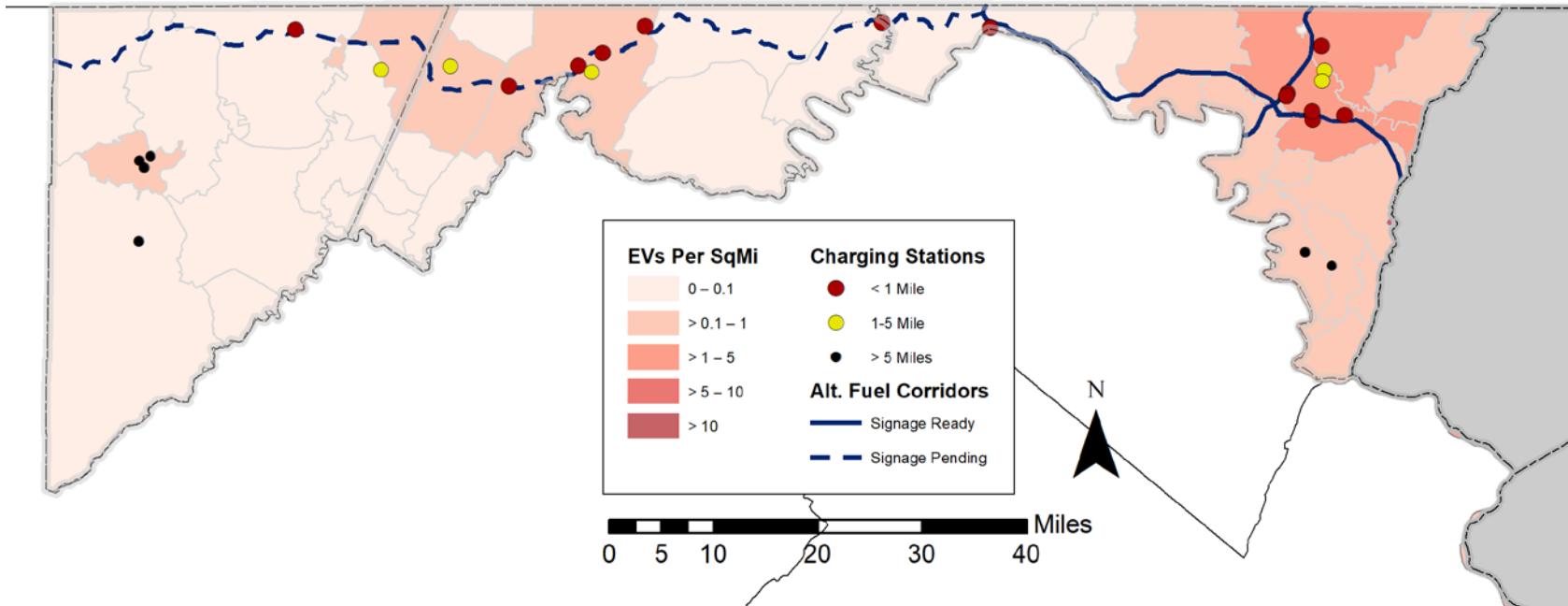
By the Numbers:

- 26 Charging Stations
  - 15 < 1 Mi from AFC
  - 5 between 1-5 Mi from AFC
  - 6 > 5 Mi from AFC
- 74 Charging Outlets

EVs Per SqMi
- 0 – 0.1
- > 0.1 – 1
- > 1 – 5
- > 5 – 10
- > 10

Charging Stations
- < 1 Mile
- 1-5 Mile
- > 5 Miles

Alt. Fuel Corridors
- Signage Ready
- Signage Pending

Miles
0 5 10 20 30 40

Infrastructure Opportunities- Western
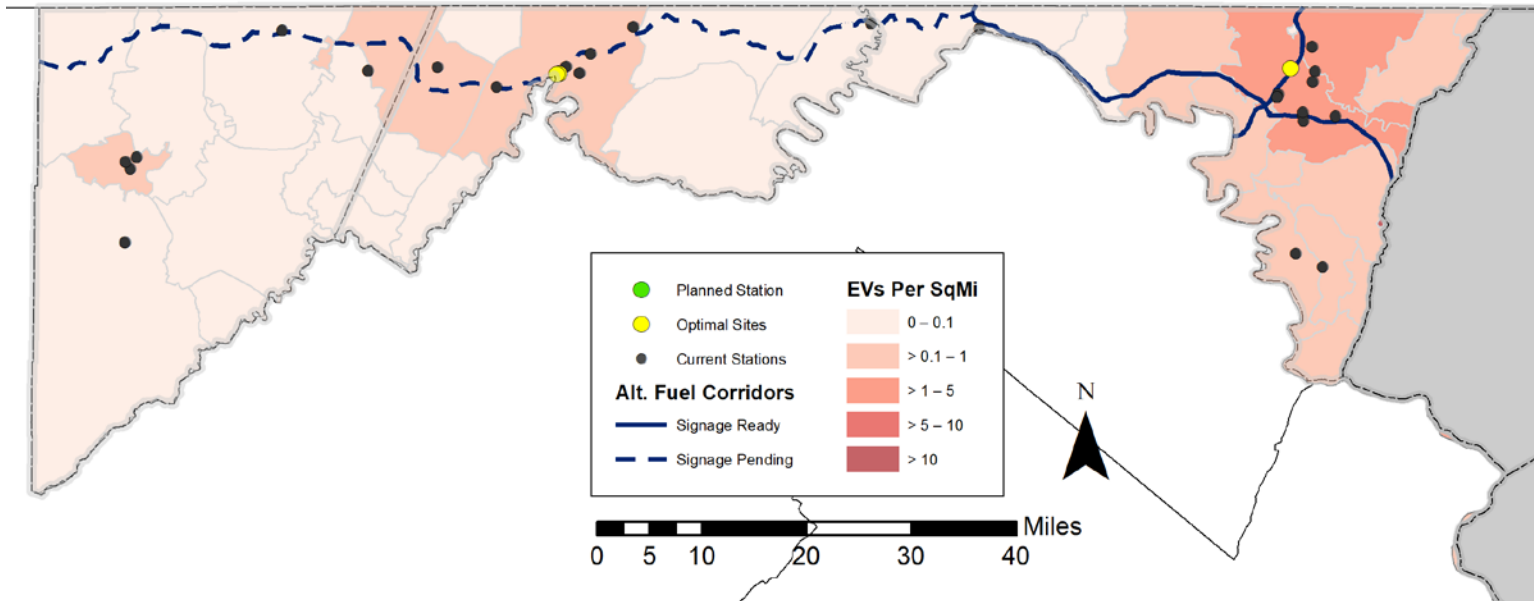
By the Numbers:

- No Utility Sites Identified

- 3 Local Govt Sites
    - No Planned Stations
    - 3 Optimal Sites

Optimal & Planned Locations

Optimal Site: Type of Charger
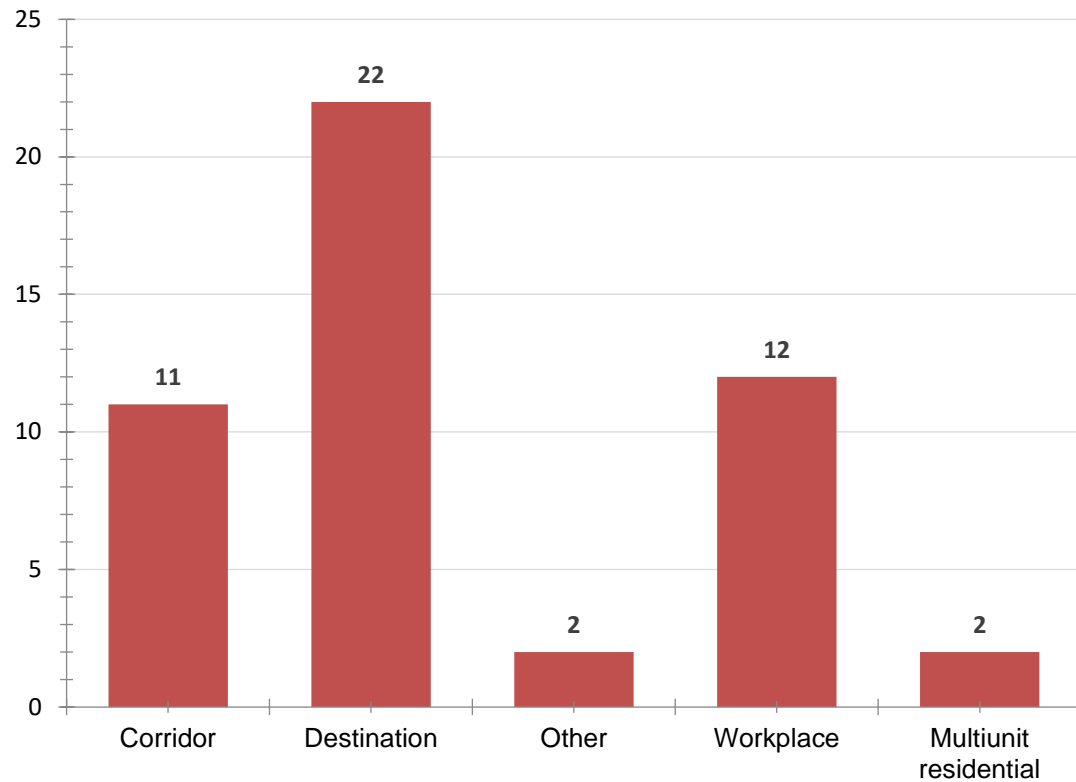
Planned Station: Type of Charger

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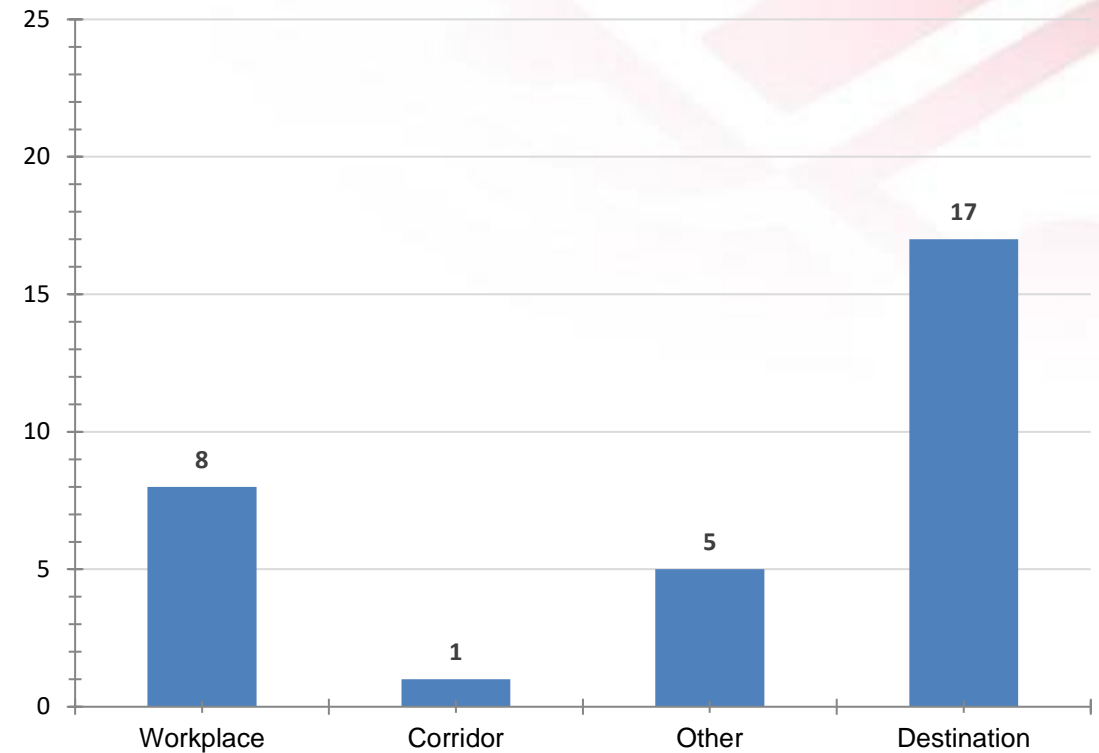
Maryland ZEV Collaboration Webinars

Local Government Outreach Survey

<u>KEY THEMES</u>

Overall funding and installation costs

Planning for rural areas

Locations for EV charging stations

   Codes/regulations

Partnerships with the state and private entities

   Coordination among stakeholders

Emerging Technology Survey

Colleen Turner, MDOT TSO

Emerging Tech. [Survey Monkey]

68 Respondents (~15% response rate)

Is your jurisdiction familiar with any of the following national entities' policy guidance documents and/or technical resources for emerging transportation technology?

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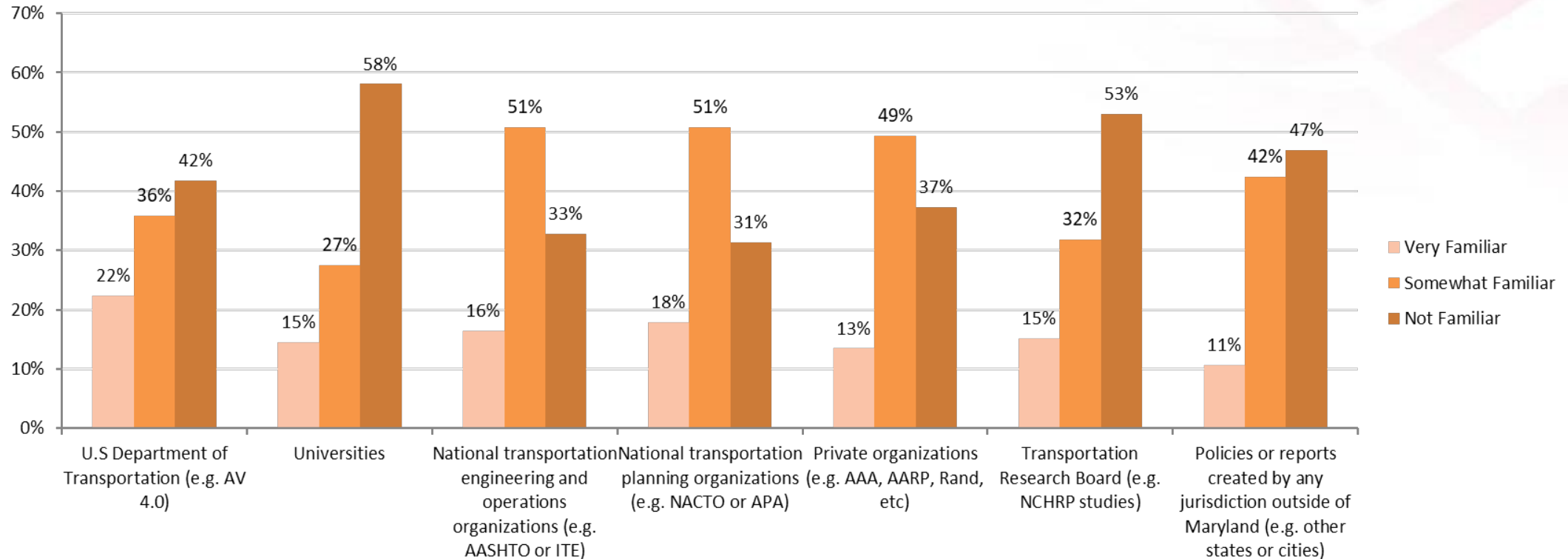
Familiarity with Existing Resources

Is your jurisdiction familiar with any of the following Maryland Emerging Technology Resources?
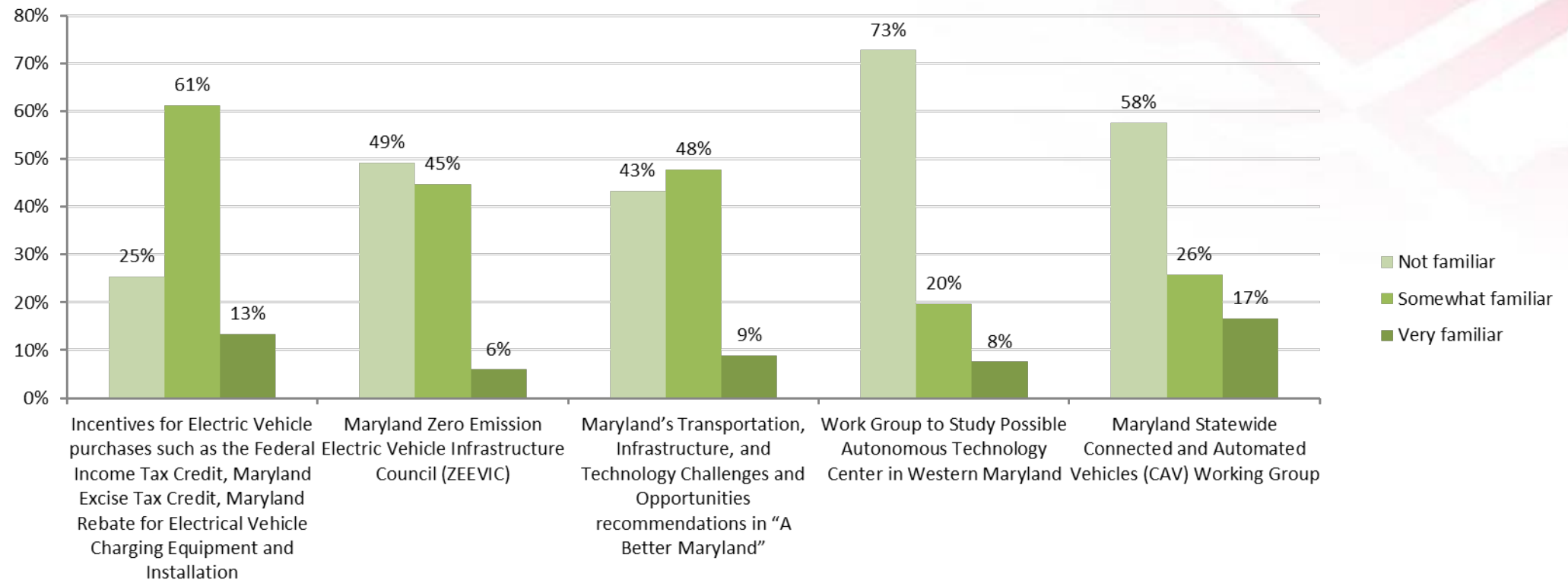
Planned & Deployed Technologies

Has your jurisdiction planned and/or deployed emerging transportation technologies

Legend: Thinking About it, Planning Stage, Active

- Short or Long Range Plan: 67%, 19%, 14%
- Charging stations for ZEV: 44%, 16%, 40%
- Dedicated Short Range Communication (DSRC) radios or Cellular Vehicle to Everything (C-V2X) devices: 88%, 6%, 6%
- Roadway sensors for vehicle re-identification (e.g. Bluetooth): 92%, 4%, 4%
- Open data portals or data feeds for the exchange of roadway information such as roadway closed notices, plow locations, etc: 68%, 21%, 11%

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Emerging Technology Priorities

Emerging Technology Survey

➢ **Top priority:** Having a better understanding of how jurisdictions fit within a shared statewide ecosystem (score: 8/10)

➢ Having established planning tools, strategies, and state policy to help start the planning process (score: 7/10)

➢ Statewide conversations on the transportation system & the economy (score: 6/10)

➢ **Lowest priority:** Managing public perception … such as the fear of automated ride-hailing vehicles (score: 4/10)

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Discussion

Identifying Challenges and Opportunities

➤ What challenges are specific to this region?

➤ What successes have local agencies had that can be grown/replicated?

MARYLAND DEPARTMENT OF TRANSPORTATION

Maryland State Agencies Overview

Maryland Energy Administration	Maryland Department of Transportation	Maryland Department of the Environment
MSEC/CFIP/CFTA	Install EVSE	ZEV MOUs
EV/EVSE (Incentives/Rebates)	Chair/Staff ZEEVIC	Maryland Clean Cars Program
Maryland Clean Cities Coalition	Track ZEV Registrations	VW Settlement
	AFC Corridors	Chair/Staff MCCC

Maryland Department of Environment

Environmental Issues

- NAAQS (National Ambient Air Quality Standards)

  - Non attainment for Ozone

  - NOx greatest contributor to ozone

  - On road Mobile Sources are largest contributor to NOx in Maryland

- Climate Change

  - Due to geographic location, Maryland very vulnerable to effects of Climate Change

  - 2015 Maryland updated to the Maryland GGRA (Greenhouse Gas Reduction Act), requires 40% reduction by 2030

  - On-road mobile sources account for over a third of all GHG emissions

MDE – Environmental Actions

Maryland Clean Car Program

- Adopted in 2008 and implemented in 2011
- Adopts California's low emission vehicle program
- Includes ZEV mandate requiring manufacturers to make larger share of new vehicles for sale in Maryland ZEVs

Light Duty ZEV MOU

- Signed in 2013 and updated in 2018, includes 9 states
- Developed an Action Plan to increase the use of light duty ZEVs
- Set a goal of 300,000 plug-in vehicles in Maryland by 2025

MHD ZEV MOU

- Signed by 15 states and the District of Columbia in July 2020
- Will develop an Action Plan to support the implementation of MHD ZEVS
- Sets a 30% sales goal for MHD ZEVs by 2030

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MDE – VW Settlement

Volkswagen Settlement Funds

Maryland Volkswagen Settlement Agreement ($75.7 million)

- Targets NOx reductions, replaces older heavy-duty diesel engines (class 4-8) with new cleaner options and funds light duty charging infrastructure
- Projects must be completed by October 2027

Heavy –Duty Vehicle Replacement Program (approx. $64 million)

- Proposals were due to MDE by May 6th, 2019; MDE received approx. 44 proposals
- MDE completed its review of proposals and is in process of finalizing funding and contracts

Light Duty Charging Infrastructure (approx. $11.3 million)

- Comments until Oct. 12th and will begin to accept proposal late October. Three funding rounds
- Focus on workplace charging, state owned properties and corridor/Hub location

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Maryland Energy Administration

MEA – Mike Jones, Transportation PM

- Maryland Clean Cities Coalition
  - Part of US DOE Clean Cities program to reduce reliance on foreign petroleum in transportation
  - National network, expertise and resources available
- Maryland Smart Energy Communities (MSEC) Program
  - Local governments can receive project funding in exchange for adopting sustainability policies (EE/RE/TR)
  - Light-duty EVs and fleet charging infrastructure
    - Less than 200 miles of all electric range: 100% of vehicle incremental cost up to $3,750/vehicle
    - 200 miles +: 100% up to $7,500/vehicle
    - 60% (charger + install) up to $6,000/charger
  - Applications due 11/13/2020

MARYLAND DEPARTMENT OF TRANSPORTATION

MEA – Clean Fuels Incentive Program

Clean Fuels Incentive Program (CFIP)

- 2 AOI: public infrastructure (DCFC/hydrogen) and fleet vehicles (PHEV/BEV/FCEV)
- Reporting requirement (vehicles- 3 years, infrastructure- 5 years)
- Applications due 12/15/2020

Alternative Fuel Type	Vehicle Class	AER (for EV's only)	% of Incremental Cost Eligible for Grant Request	Maximum Grant Award (per new vehicle)
Electric (PHEV/BEV)	Class 3-8	0-99 miles	Up to 100%	$25,000
		100+ miles	Up to 100%	$50,000
Hydrogen (FCEV)	Class 1-2		Up to 100%	$7,500
	Class 3-8		Up to 100%	$50,000

MEA – Additional Incentive Programs

Electric Vehicle Supply Equipment (EVSE) Rebate Program

- First-come, first-served. Application submitted in arrears, no pre-approval.
- All charger deployments eligible, but geared at non-fleet L2 (workplace and/or publicly available chargers)
- Fall back option for fleet L2 (in case MSEC funding isn't secured)
- 40% up to $4,000/charger

Clean Fuels Technical Assistance (CFTA) Program

- Not a grant program- local governments can receive TA to develop fleet electrification strategies
- First-come, first-served pilot/test-of-concept
- Anticipate 4-8 projects
- More details/opening coming by mid-October

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Maryland Department of Transportation

Zero Emission Electric Vehicle Infrastructure Council (ZEEVIC)

- Created in 2011 Through Legislation
- Meets every other month
- Working Groups meet in off-months
- Annual Report Due in December
- GIS StoryMap Illustrating Goals & Progress

Maximize the use of grant and alternative funding opportunities for EV / EVSE in MD.

Develop an approach to address the Right to Charge and EV Parking / Anti-Icing.

Ensure EV readiness through strategic infrastructure planning that focuses on corridors, workplaces, and communities.

Continue education and outreach coordination with a focus on diversity and equity.

Received 2019 Visionary Award Greater Washington Region Clean Cities Coalition (GWRCCC)

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION.

MDOT – ZEV Public Outreach Efforts

Table 4: 2019 Public Outreach

Date	Outreach Event	Individuals/ Touchpoints	Outreach Languages
07/20/2019	World Heritage Festival	141	English
08/05/2019	Festival Latino de Maryland	251	English, Spanish
08/11/2019	Latin Heritage Festival	754	English, Spanish
09/07/2019	Caribbean Food and Wine Festival	351	English
09/15/2019	Hagerstown Hispanic 13th Annual Festival	375	English, Spanish
09/21/2019	42nd Annual Korean Festival	1,027	English, Korean
10/20/2019	Howard County Diwali Festival	201	English

Statewide
25 Events
7,370 Touchpoints

Western
4 Events
1,249 Touchpoints

- Interstate Wine Festival, Keedysville, 2018
- Boonsboro GreenFest, 2017
- Deep Creek Autumn Glory Festival, 2017

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

MDOT – #MarylandEV

MDOT – Alternative Fuel Corridors

- Electric Vehicle Charging Corridors
    - 21 Corridors in MD
    - Maryland featured in Alternative Fuel Corridor National Report
- I-70 through WV
- I-81 VA-PA
- Interest from PA in US 15
- Signage Plan Pending

MD EV charging corridors

68 70 81 83 95

97 270 495 695 795

4 5 32 100 140 295 528

1 13 50 301
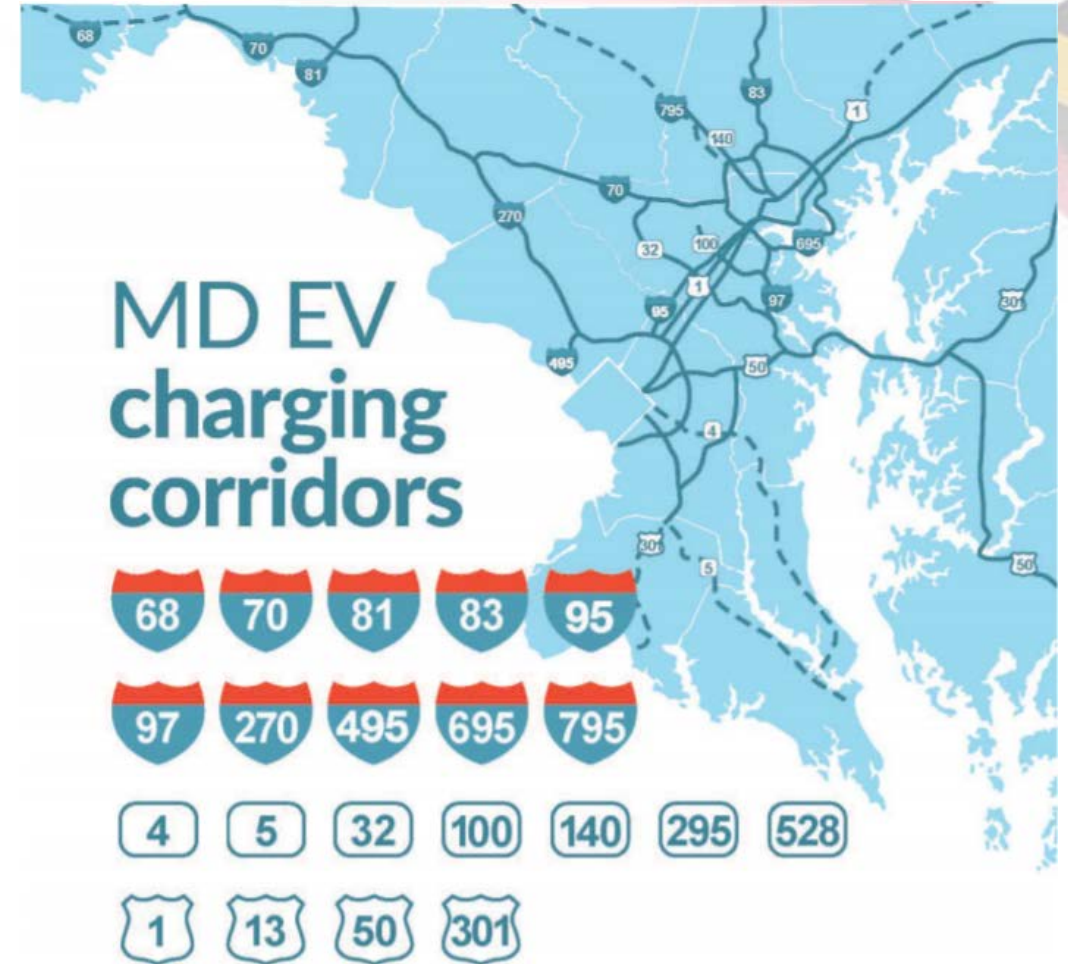
Additional Resources in Your Region

- [Potomac Edison EV Driven](#) – Installing 59 public charging stations.
- First public charging station in [Frostburg](#) (Allegany County).

Weston Young, Rural Representative
Assistant Chief Administrative Officers, Worcester County

Liam Davis, Urban Representative
Baltimore City Department of Transportation

Nina Forsythe, Rural Representative
Commissioner, City of Frostburg

David Edmondson, Urban Representative
Planner, City of Frederick

MARYLAND DEPARTMENT OF TRANSPORTATION

Discussion

Moving Forward

➤ Where are the opportunities for local agencies to advance ZEV within the region?

➤ How can state agencies and others support advancement of ZEV?

➤ What is the best way to reach the public?

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Recap & Next Steps

- Available State Incentives
  - MDE / VW
  - MEA Incentives
  - Utility EV Charging Stations
- Other Public-Private Partnerships
  - Strategic Planning
  - Attend ZEEVIC / Work with Local Representatives / Clean Cities Coalitions
  - Social Media and Websites
  - Opportunities for Continuing this Conversation and / or Facilitating Local Discussions
- Attend Statewide Webinar -
  https://attendee.gotowebinar.com/register/682221607327331296

MARYLAND DEPARTMENT OF TRANSPORTATION

State Agency Contact Information

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Mike Jones

Maryland Energy Administration

Email: michael.jones1@maryland.gov

Tim Shepherd

Maryland Department of the Environment

Email: tim.shepherd@maryland.gov

Resources

- MDE VW Information: mde.vw@maryland.gov

- Maryland EV: https://marylandev.org/

- ZERO Emission Electric Vehicle Council (ZEEVIC):
- http://www.mdot.maryland.gov/newMDOT/Planning/Electric_Vehicle/About_the_Council.html

- MDE EV Incentives:
- https://mde.maryland.gov/MarylandGreen/Documents/EV_dealershipflyer_online.pdf

- US DOE Alternative Fuels Data Center: https://afdc.energy.gov/

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