



MARYLAND

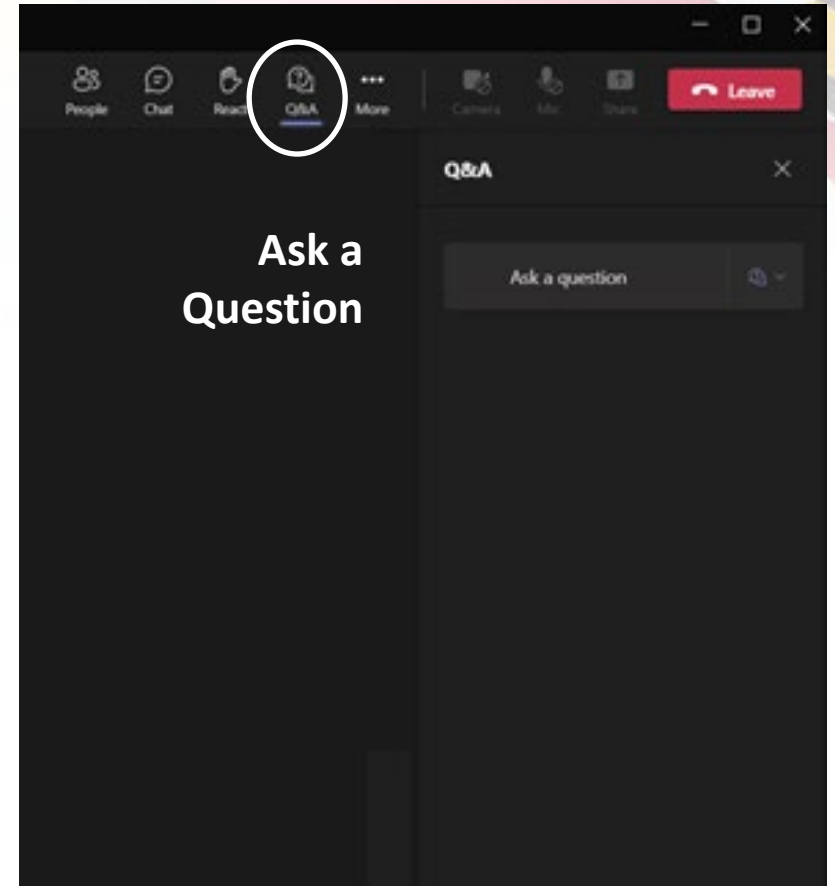
Zero Emission Vehicle Infrastructure Plan (ZEVIP)

Webinar #1
March 31, 2022

Welcome

Housekeeping

- This meeting is being recorded
- Slides will be made available on the ZEVIP website
- Comment or ask questions through the Q&A panel
- Tech difficulties? Contact us via EVPlan@mdot.Maryland.gov



Agenda

- Introductions
- Opening Remarks
- Overview of NEVI & AFCs
- Other Funding Opportunities
- ZEVIP Vision & Goals
- Priorities
- Schedule
- Next Steps

Introduce Speakers

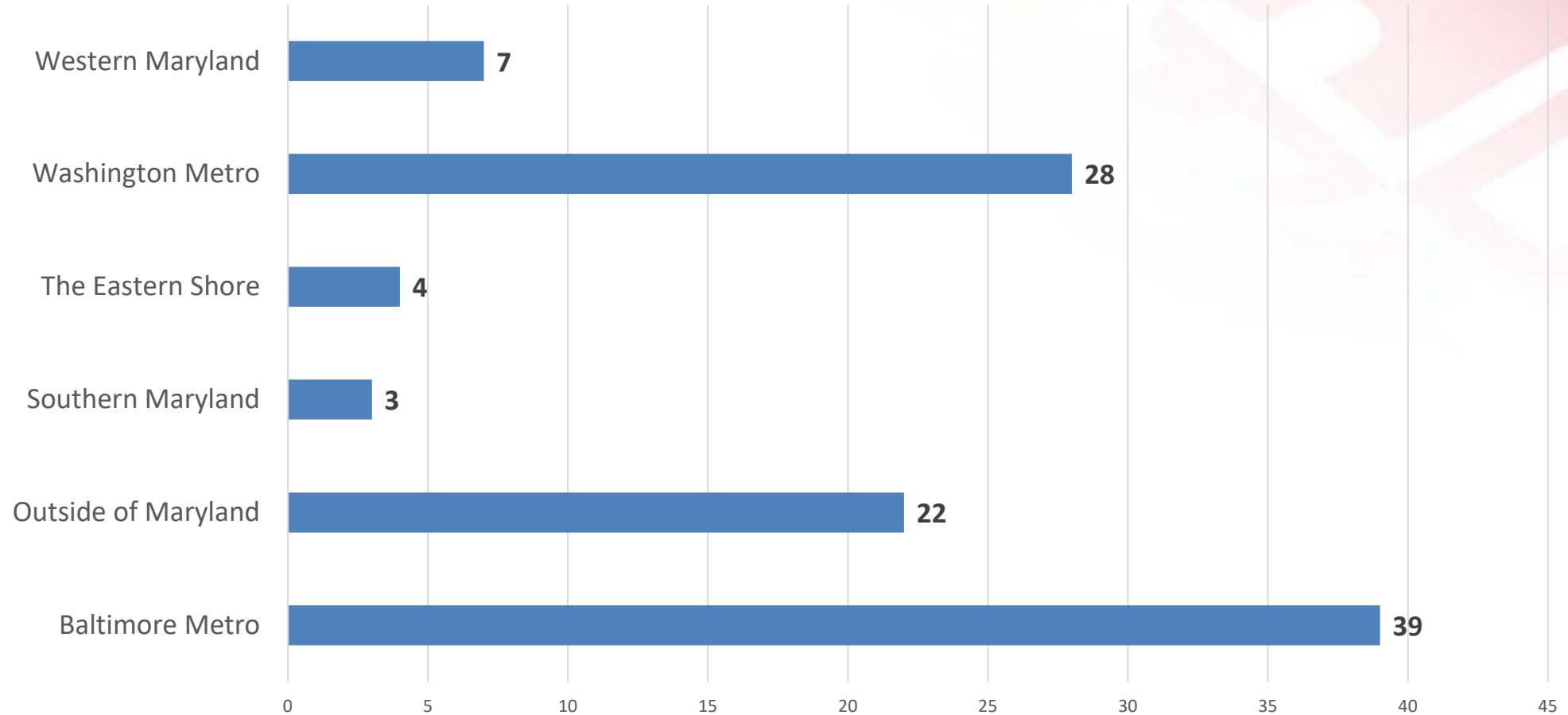
- Dr. Mary Beth Tung, Director, Maryland Energy Administration
- R. Earl Lewis, Deputy Secretary, Maryland Department of Transportation
- Dan Janousek, Maryland Department of Transportation
- Mike Jones, Maryland Energy Administration
- Rebecca Bankard, Maryland Department of Transportation/Michael Baker International

Opening Remarks

- Dr. Mary Beth Tung, Director, Maryland Energy Administration
- R. Earl Lewis, Deputy Secretary, Maryland Department of Transportation

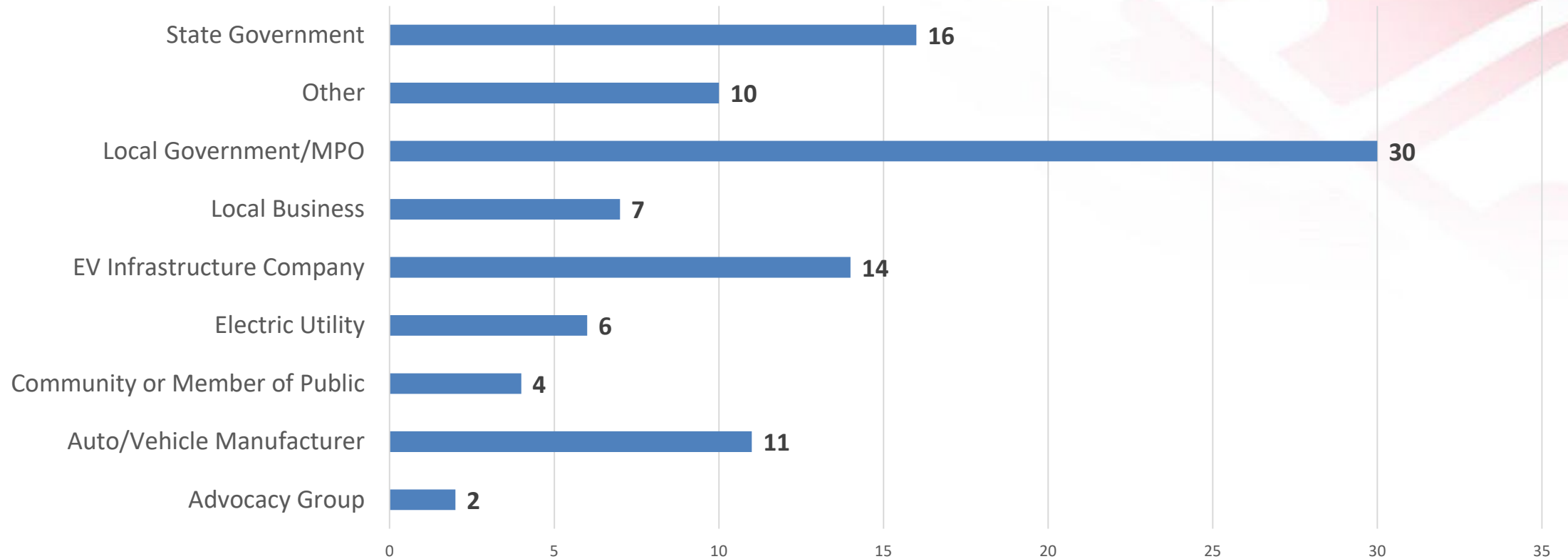
Poll # 1 Results [103 Responses]

Where are you joining us from?



Poll #2 Results [100 Responses]

What type of organization are you representing?



Overview of NEVI & AFCs























































































NEVI

Address National Electric Vehicle Infrastructure (NEVI) Program – AFC Focus

- Rural Charging Toolkit Issued Early February
- Initial Guidance Issued February 10th
- Critical Technical Guidance is Expected on May 13th
- State **EV Infrastructure** Plan Required by August 1st
 - Joint MDOT and MEA Lead

Maryland will receive approximately \$60 million over 5 years

DOT Funding and Financing Programs with EV Eligibilities*

| | FY 2022 ¹ AMOUNT |  |  |  |  |  |  |
|---|--------------------------------|---|---|---|---|---|---|
| FORMULA PROGRAMS | | | | | | | |
| National Highway Performance Program (NHPP) | \$28.4 B ² |  |  | | | |  |
| Surface Transportation Block Grant Program (STBG) | \$12.5 B ^{2,3} |  |  | |  |  |  |
| Congestion Mitigation & Air Quality Improvement Program (CMAQ) | \$2.5 B ² |  |  |  | |  |  |
| National Highway Freight Program (NHFP) | \$1.4 B ² | | |  |  |  | |
| State Planning and Research (SPR) | \$983.3 M ⁴ | | | |  | | |
| Metropolitan Planning (PL) | \$438.1 M ² | | | |  | | |
| Carbon Reduction Program | \$1.2 B ^{2,5} |  |  |  |  |  |  |
| National Electric Vehicle (NEVI) Formula Program | \$685 M ^{2,5,6} |  |  | |  |  |  |
| DISCRETIONARY PROGRAMS | | | | | | | |
| Rebuilding American Infrastructure with Sustainability and Equity (RAISE) (formerly known as BUILD) | \$1.5 B |  | | |  |  |  |
| Infrastructure for Rebuilding America (INFRA) Grant Program | \$1.64 B ^{2,7} |  | | |  |  | |
| Advanced Transportation and Technologies and Innovative Mobility Deployment | \$60 M ² |  | | | | |  |
| Discretionary Grant Program for Charging and Fueling Infrastructure | \$300 M ^{2,5} |  |  | |  |  |  |
| Rural Surface Transportation Grant Program | \$300 M ^{2,5} |  |  | |  |  |  |
| Reduction of Truck Emissions at Port Facilities Program | \$80 M ^{2,5,7} |  | |  | |  | |
| OTHER ALLOCATED PROGRAMS | | | | | | | |
| Federal Lands and Tribal Transportation Program (FLTTP) | \$1.3 B ^{2,8} |  |  |  |  |  |  |
| Puerto Rico Highway Program (PRHP) | \$173 M ² |  |  |  |  |  |  |
| Territorial Highway Program (THP) | \$46 M ² |  |  | |  |  |  |
| INNOVATIVE FINANCE PROGRAMS | | | | | | | |
| State Infrastructure Banks (SIBs) | Varies |  |  |  |  |  |  |
| Transportation Infrastructure Financing and Innovation Act (TIFIA) | \$250 M ² |  |  |  |  |  |  |

Requirements for NEVI

1 | Build Out **ALL** Existing Corridors

2 | Obtain Certification

3 | Invest in Communities

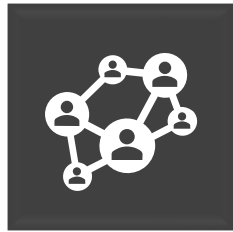
Build Out Requirements

- ≤ 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 Plan Components



Introduction



State Agency
Coordination



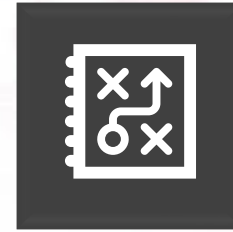
Public
Engagement



Plan Vision &
Goals



Contracting



Existing &
Future
Conditions



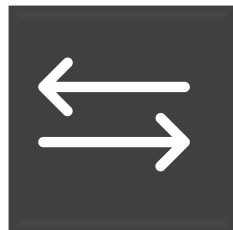
EVSE
Deployment



Implementation



Civil Rights



Equity
Considerations



Labor &
Workplace
Considerations



Cybersecurity



Program
Evaluation



Discretionary
Exceptions

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

Other Funding Opportunities

Infrastructure Funding Programs



Maryland
Department of
the Environment

Charge Ahead Grant
Program

Electric Corridors Grant
Program



Maryland
Energy
Administration

EVSE Rebate Program

Solar Canopy Program

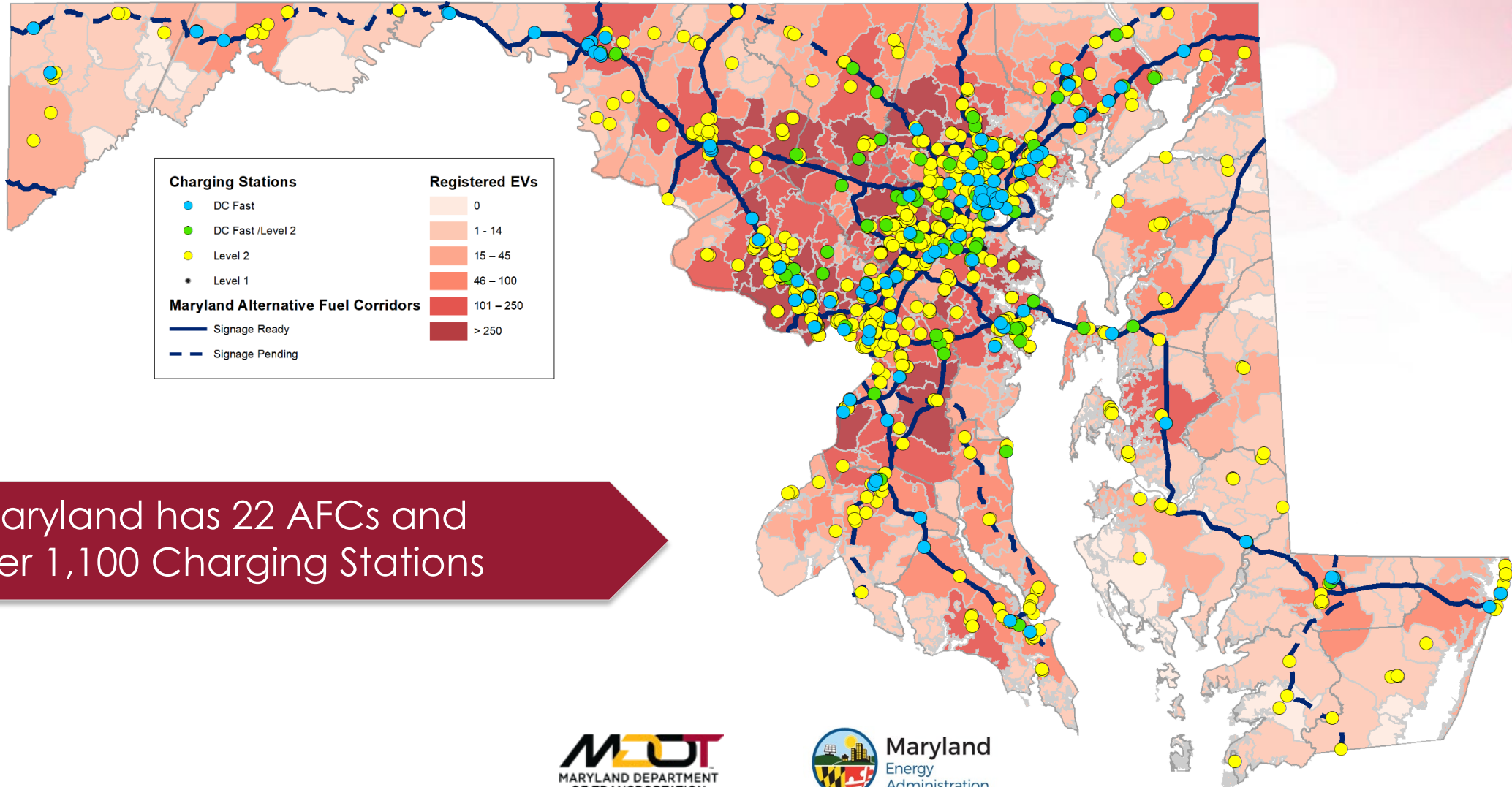
Maryland Smart Energy
Communities



PC44 – Utility Pilot
Program

EV / EVSE

Electric Vehicle Stations / Alt. Mapping

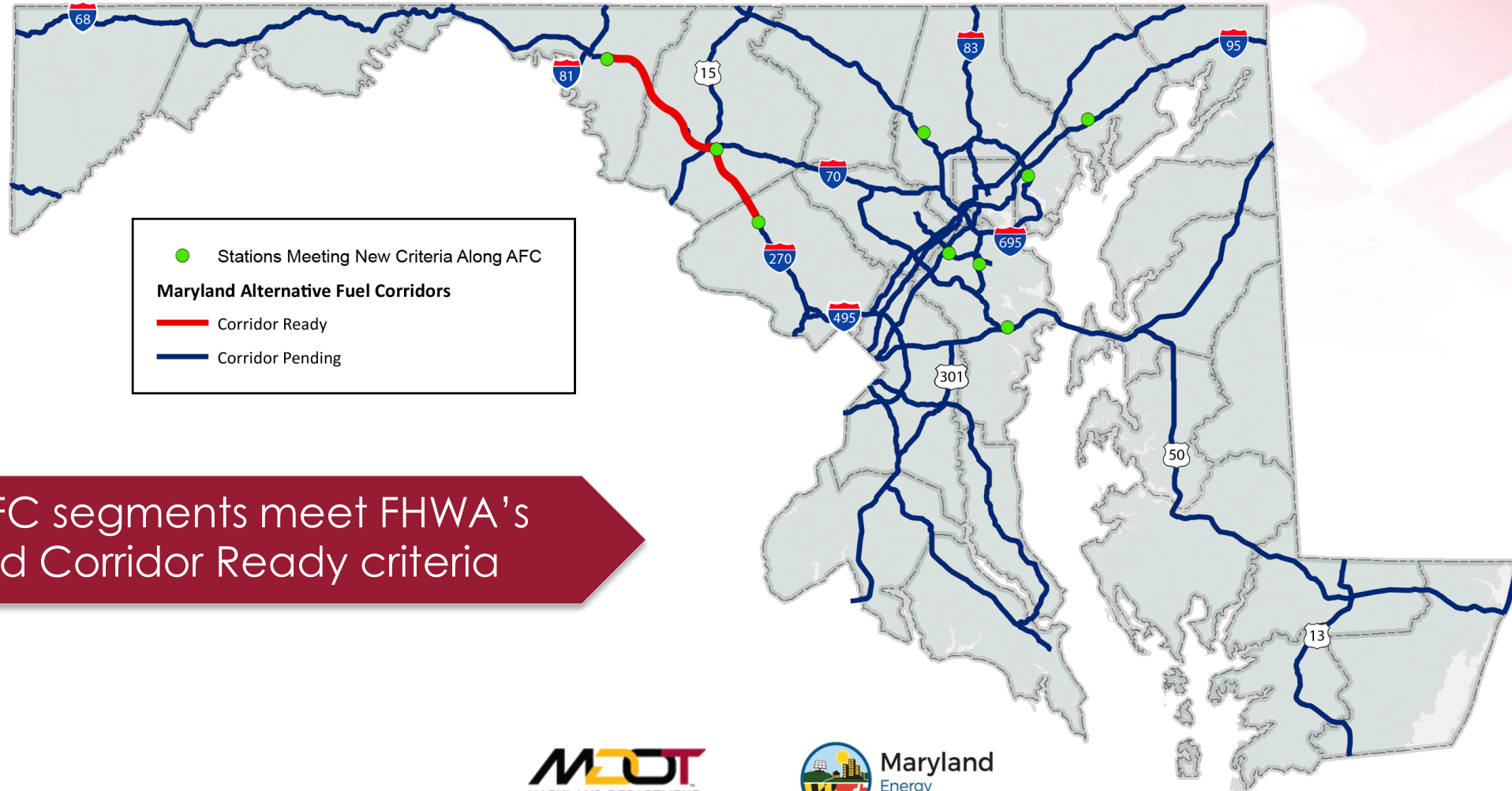


Maryland has 22 AFCs and over 1,100 Charging Stations

Guideline Changes – “Corridor-Ready”

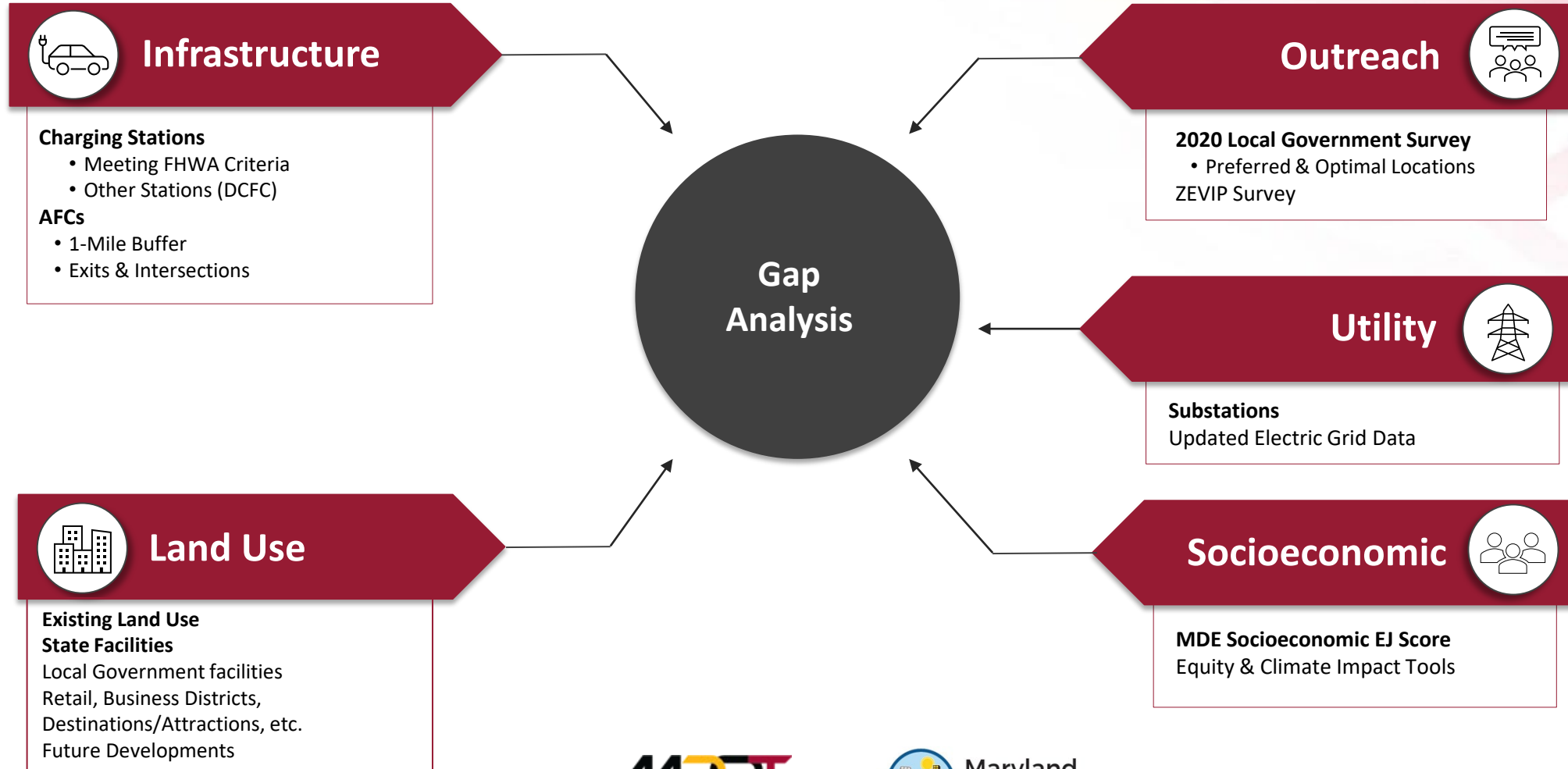
| ROUND 6 <u>CHANGES</u> | Round 5 |
|---|---|
| <p>Public DC Fast Charging:</p> <ul style="list-style-type: none">• ≤ 50 miles between one station/site and the next on corridor• ≤ 1 mile from Interstate exits or highway intersections along the corridor• Include 4 Combined Charging System (CCS) connectors - 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) | <p>Public DC Fast Charging:</p> <ul style="list-style-type: none">• ≤ 50 miles between one station/site and the next on corridor• ≤ 5 miles off the highway• Have both J1772 combo (CCS) and CHAdeMo connectors. Source: FHWA |

Potential Impact on Maryland - New

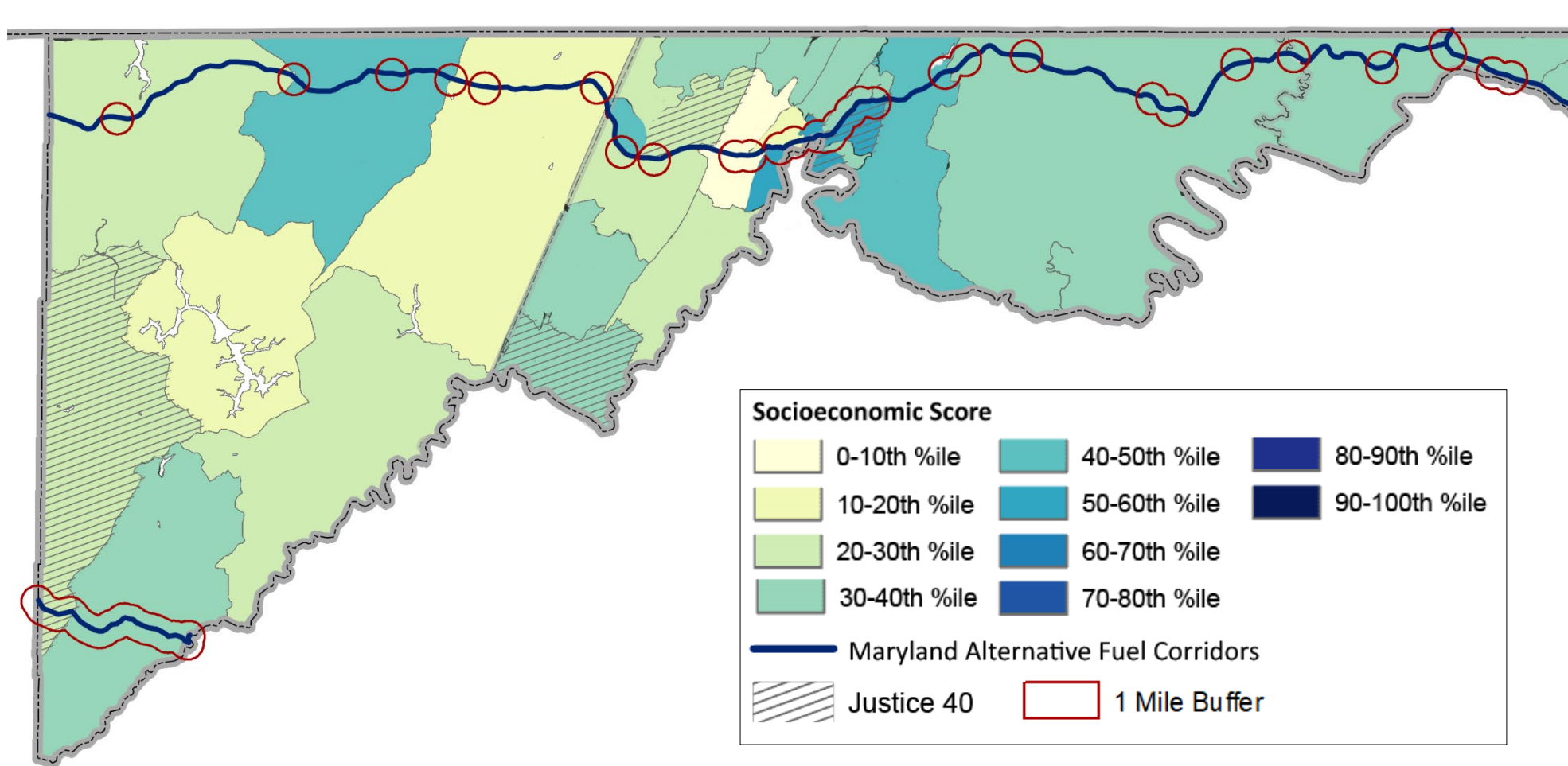


Only 2 AFC segments meet FHWA's updated Corridor Ready criteria

Data for Gap Analysis



Justice 40 vs MDE Socioeconomic EJ Score



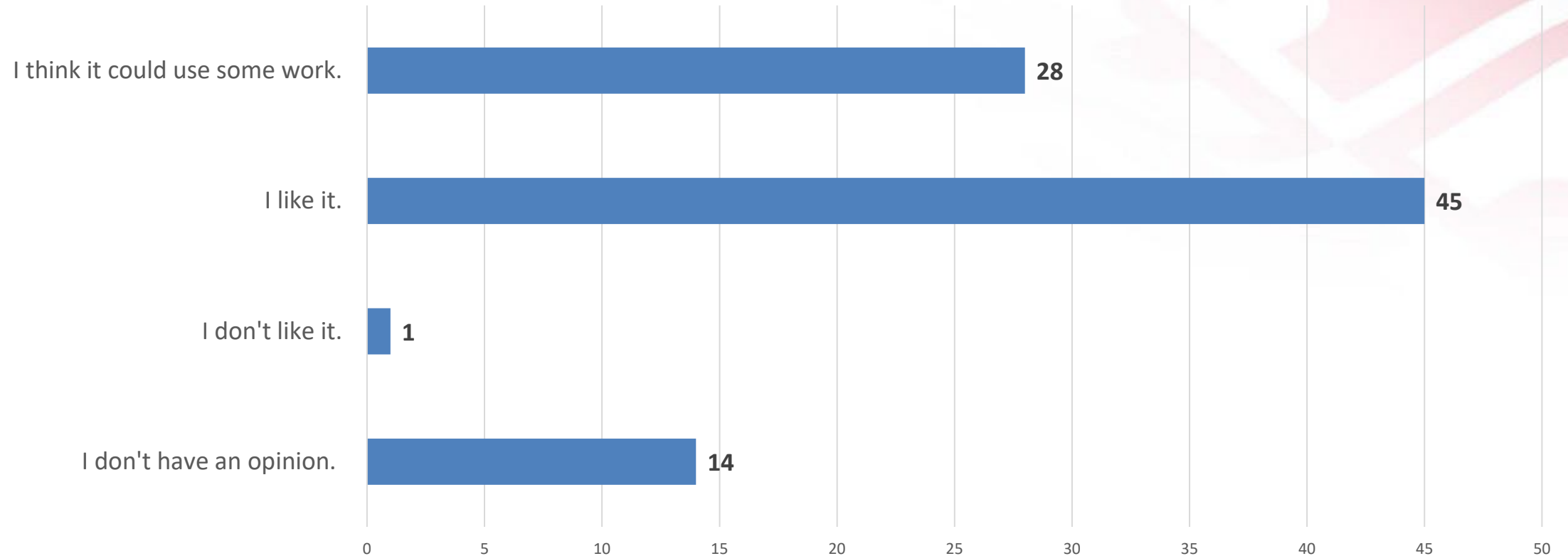
ZEVIP Draft Vision & Goals

Draft Vision

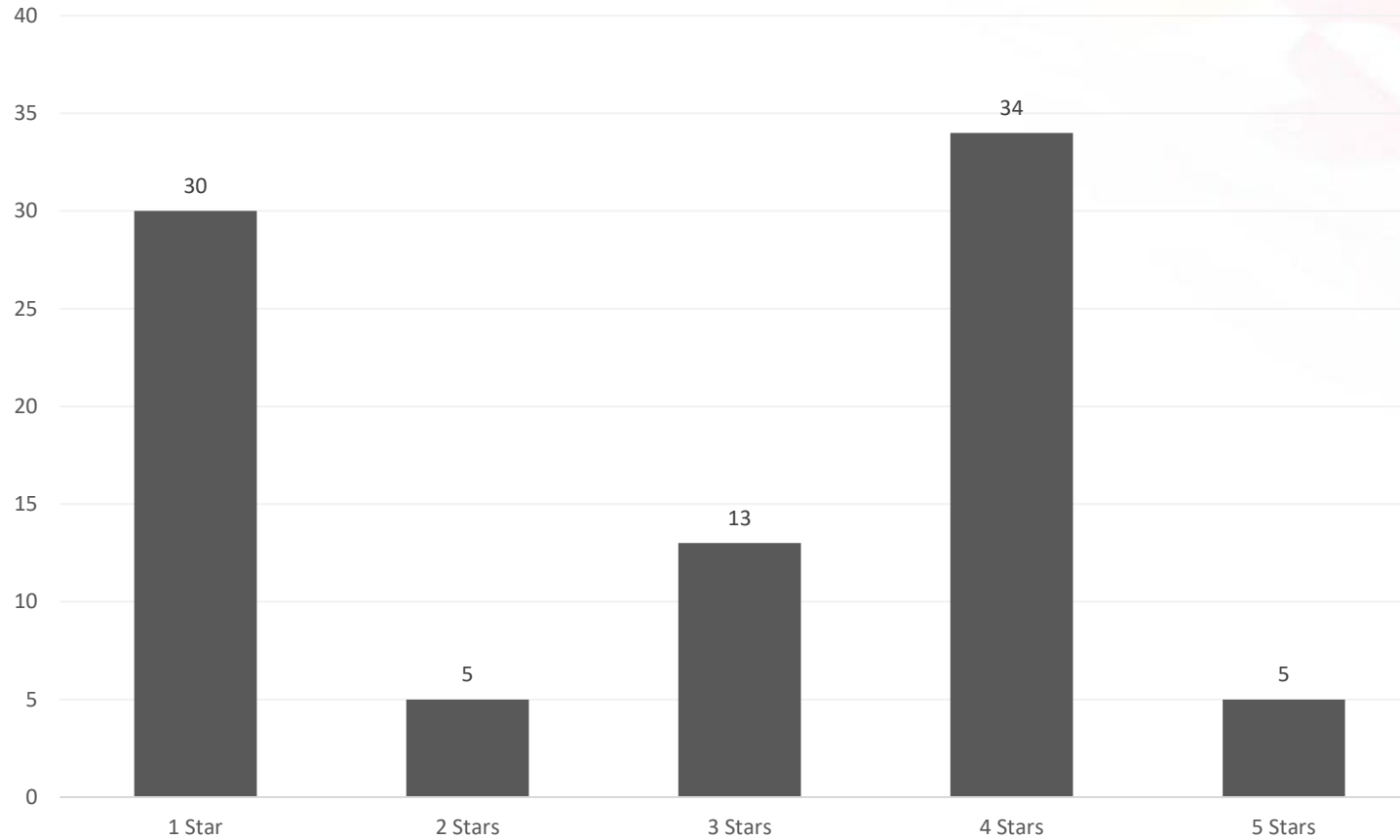
To continue leading the nation and strengthening our communities by providing equitable, reliable, and safe transportation electrification solutions.

Poll #3 Results [88 Responses]

How would you rate the Draft Vision Statement?



MetroQuest Vision Results

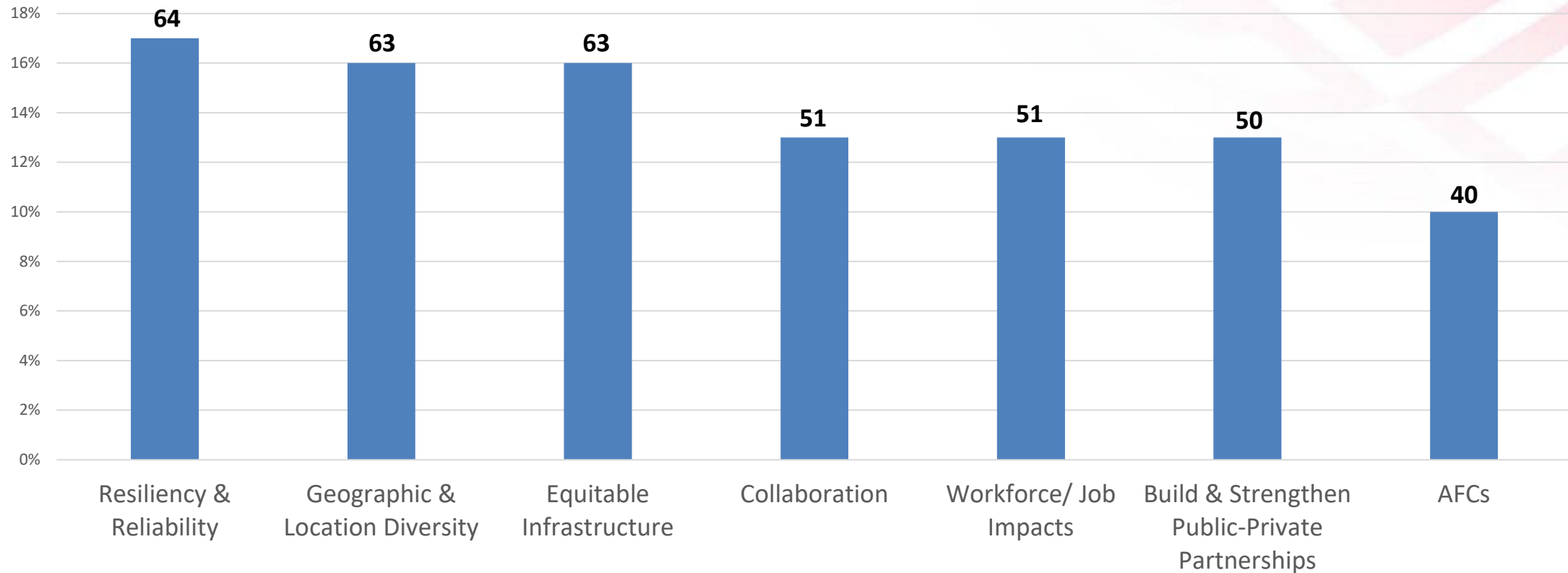


Draft Goals

| | |
|--|--|
| Alternative Fuel Corridors | Certify existing and identify future roadways |
| Equitable Charging Infrastructure | Prioritize underserved and rural communities |
| Workforce/Job Impacts | Training, experience-level, and diversity |
| Build & Strengthen Public-Private Partnerships | Contracting and implementation |
| Collaboration | State, local, regional, NGOs, and public organizations and plans |
| Resiliency & Reliability | Grid impacts, renewables, emergency preparedness, weather, operations/maintenance |
| Geographic & Location Diversity | Meet demands in various locations - Urban, suburban, rural, employment centers, MUDs, etc. |

Poll #4 Results [93 Respondents, 382 Selections]

Help us identify the goals for the NEVI Plan. Select all that apply.

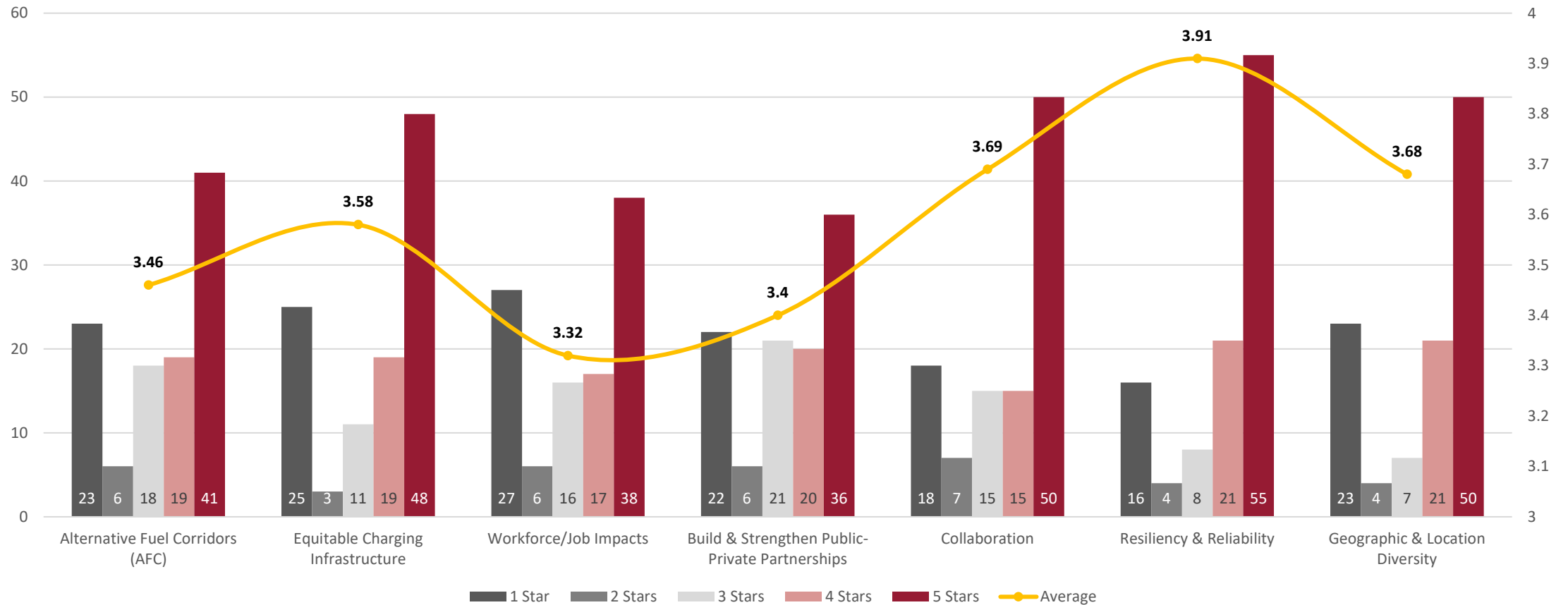


Poll #5 Results [54 Responses]

Are there other goals we should consider? Type in a word or phrase.

- Access to Transit Options [3]
- Affordability [4]
- Customer Experience [4]
- Education [3]
- Environmental (Air Pollution, EJ, GHG, Sustainability) [8]
- Heavy Duty [7]
- Housing (Townhouses, Urban Areas, Residences with no parking) [4]
- Safety [2]
- Miscellaneous (Economic Development, awareness, induction charging, maintenance, Grid Diversity) [19]

MetroQuest Goal Results



ZEVIP Priorities

Prioritization Criteria

EV Registration Density

Proximity to Residential

Access to EJ & Rural Communities

Vehicular Traffic (AADT)

Existing Infrastructure

Evacuation Routes

Point of Interest/Destination

Proximity to Employment Centers

Distance to Nearest Charging Station

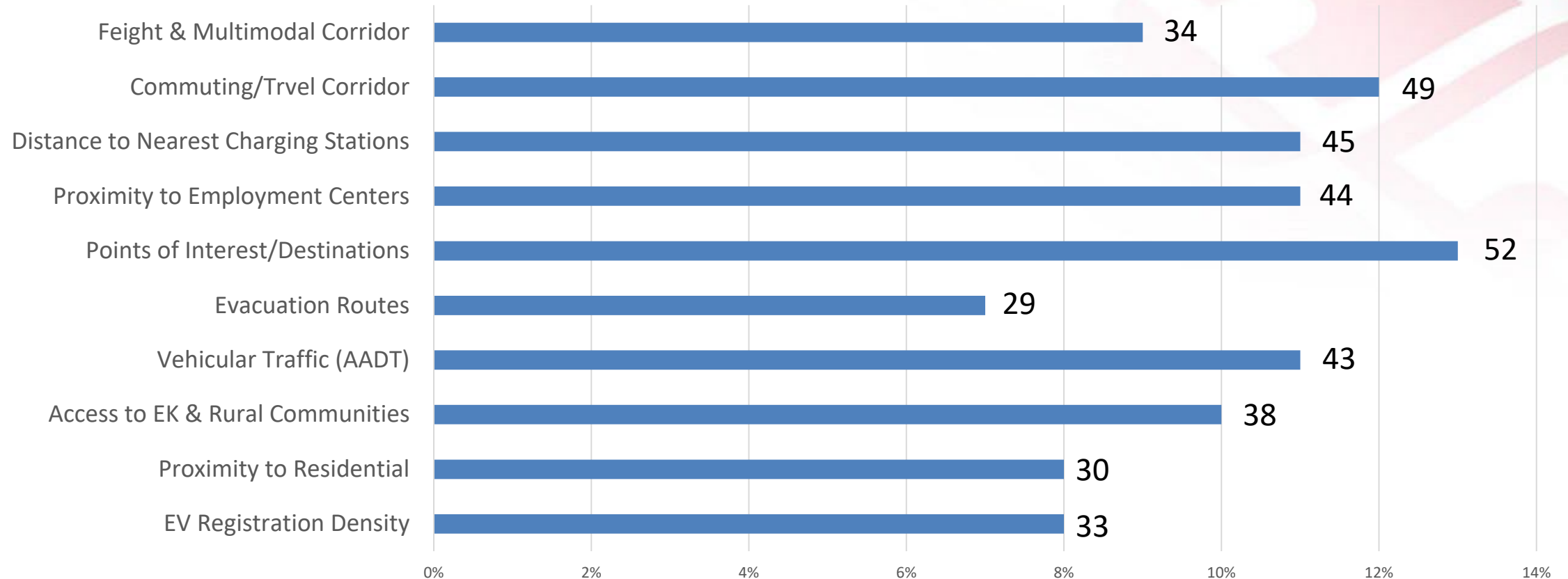
Commuting/Travel Corridor

Freight & Multimodal Corridor

Others?

Poll #6 Results [80 Respondents, 397 Selections]

Help us identify prioritization criteria. Select all that apply.

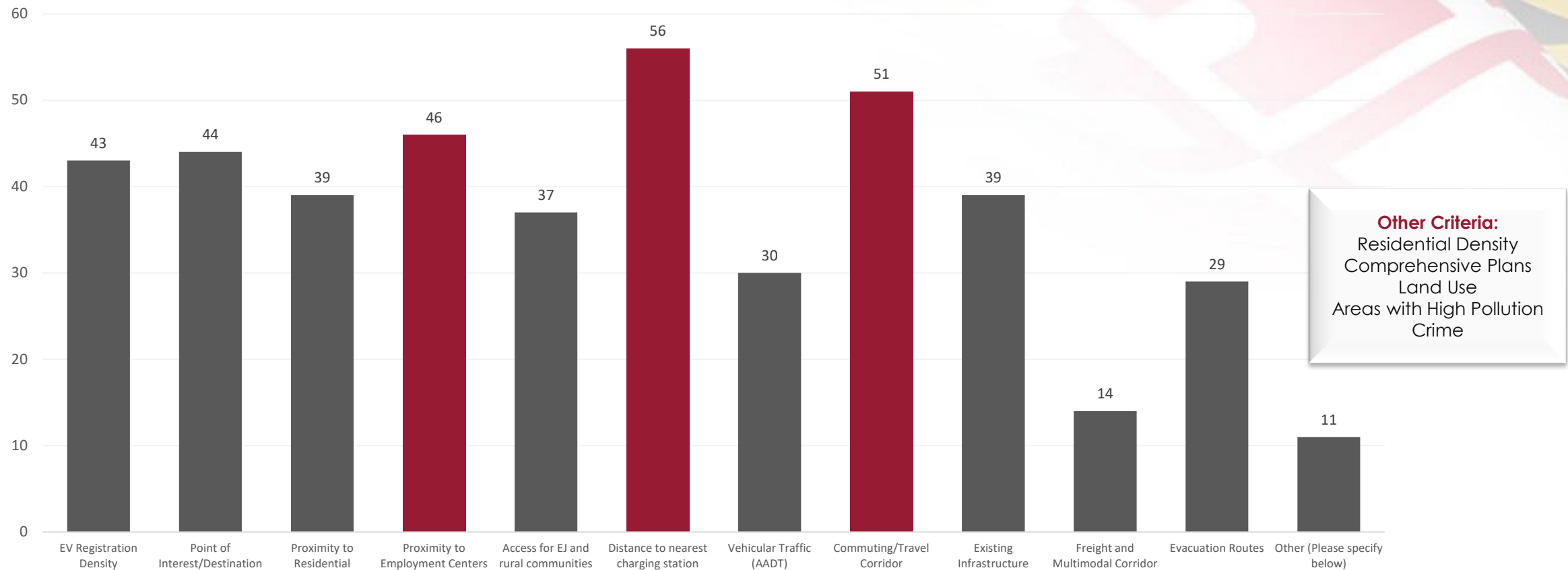


Poll #7 Results [51 Responses]

Are there other prioritization criteria we should consider that weren't listed? Type in a word or phrase.

- Access to Amenities (Hotels, gyms, Town Centers, etc.) [4]
- Existing infrastructure (Wattage, existing stations) [4]
- Multi-Family Housing [4]
- Incentives [5]
- Schools [4]
- Traffic Congestion/ Delays [4]
- Overnight Stations (Transit Stations, Workplace) [5]
- Miscellaneous (proximity to exits, public/private charger access, costs, etc.) [21]

MetroQuest Prioritization Criteria Results



Preferred Location

Employment Centers

Government Buildings

Schools & Libraries

Parking Garages/Lots

Multifamily/Townhomes Area

Park & Recreational Areas

Retail/Shopping Corridors

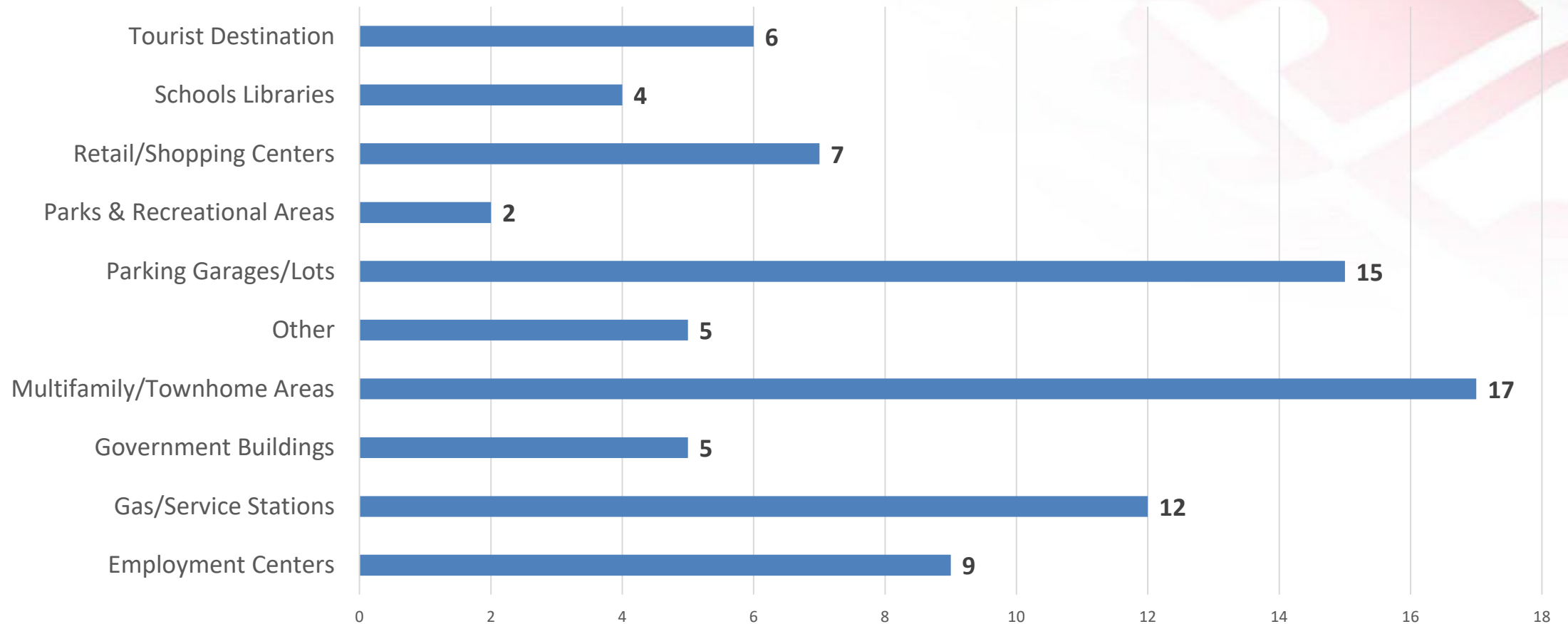
Tourist Destinations

Gas/Service Stations

Others?

Poll #8 Results [82 Responses]

What are preferred locations for installing charging stations? Select the most important.

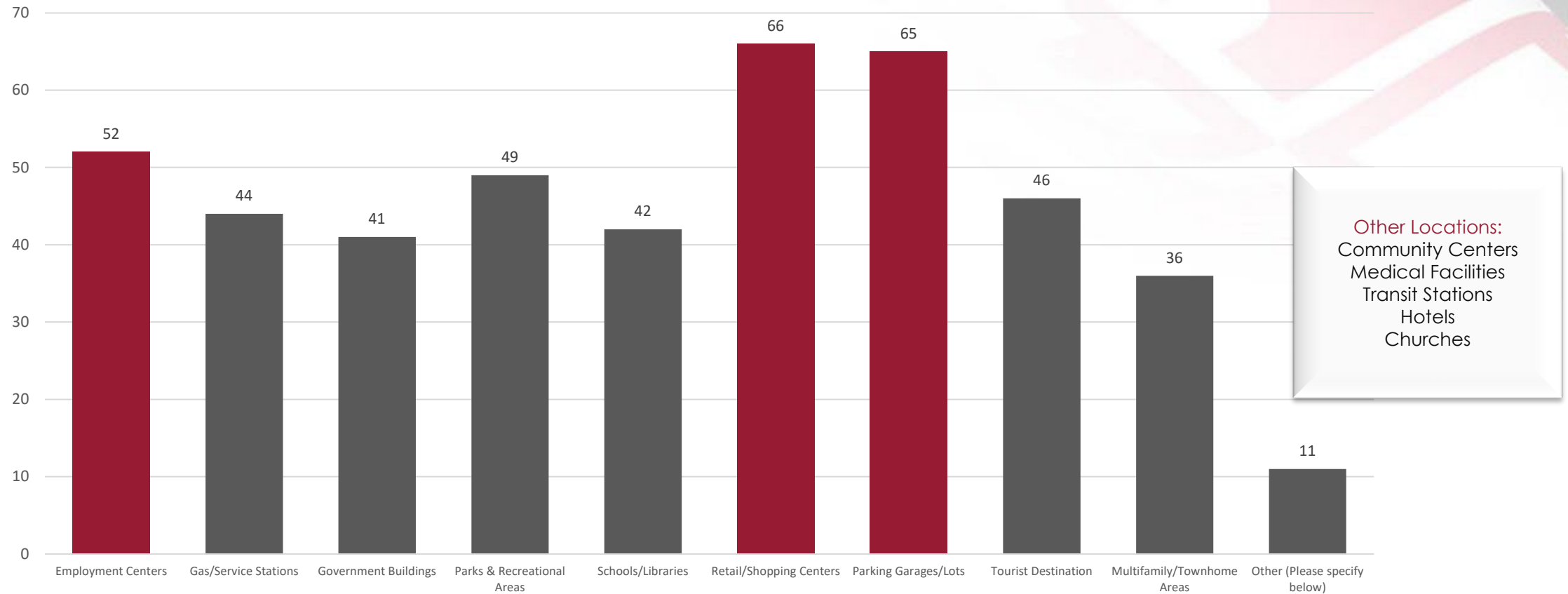


Poll #9 Results [57 Responses]

Are there other preferred locations we should consider that weren't listed? Type in a word or phrase.

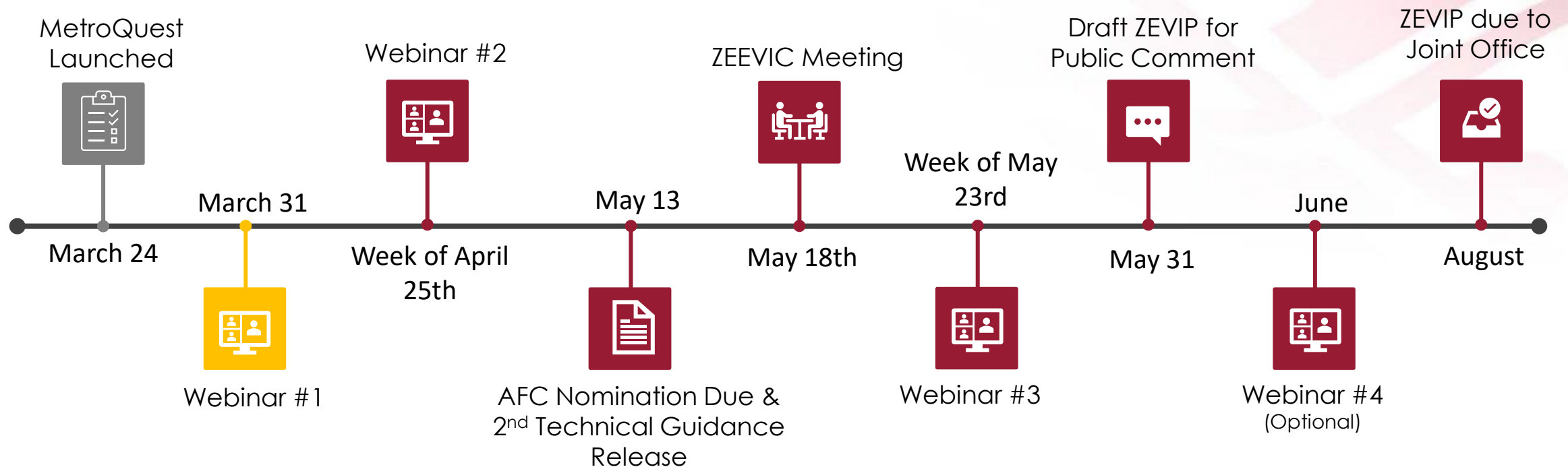
- Entertainment Areas (Convention Centers, Sports Arenas, Shopping Centers, etc.) [12]
- Fleet Charging (Fleet Charging, Heavy Duty Trucks)[13]
- Hospitals [3]
- Rest Areas [6]
- Transit [3]
- Schools [3]
- Warehouses [2]
- Miscellaneous (Faith Centers, Government owned areas, etc.) [15]

MetroQuest Preferred Location Results



Schedule

2022 Key Dates (Subject to Change)



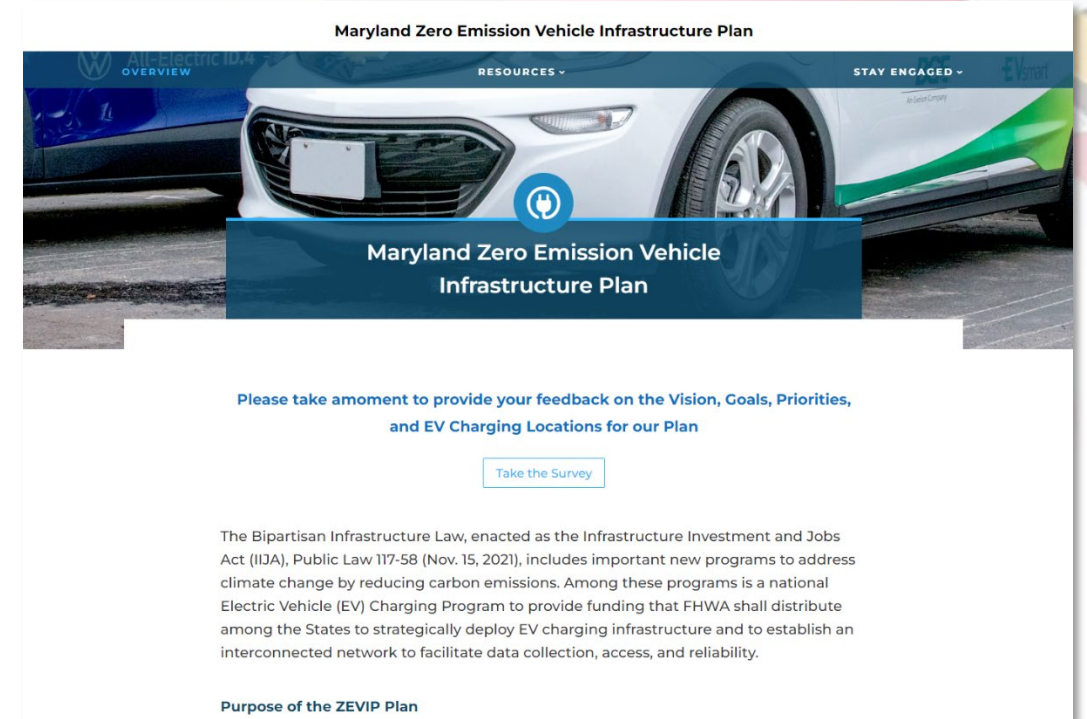
Next Steps

Future Webinars

- Webinar #2 – Week of April 25th
 - Equity (Outreach, Corridor Analysis, Considerations)
- Webinar #3 – Week of May 23rd
 - Technology Focus, Progress

ZEVIP Website – Updated Regularly

- Overview / Schedule / Meetings
- Links to Surveys / Materials
- Links to EV Resources
- Interact – Mailing List & Contact Form
 - Submit questions
- Coming Soon:
 - FAQs
 - Data & Analyses
 - Tracking / Progress

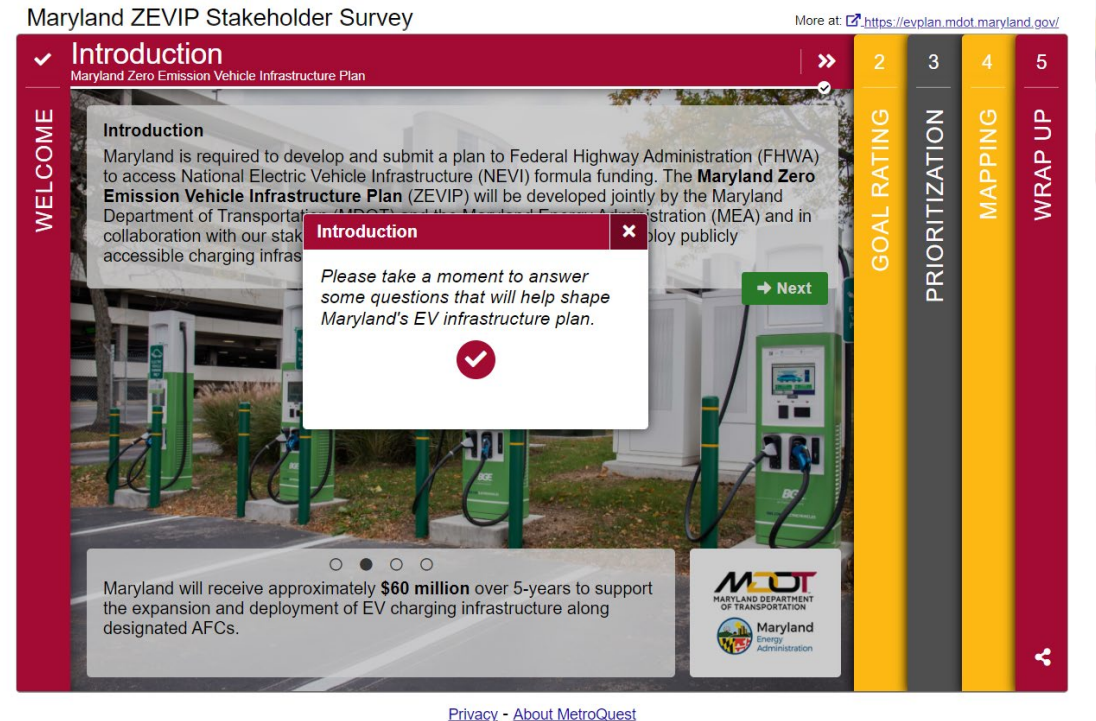


Visit the Maryland ZEVIP Website:

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

MetroQuest Survey

- Survey launched – March 24th
- Opportunity for Feedback & Comment:
 - Vision and Goals
 - Prioritization
 - Infrastructure Siting



Take the Survey:

<https://metroquestsurvey.com/az1f1d>

Maryland Infrastructure Planning

Continue Leading in Maryland & Develop Overall Plan

- Goes Beyond AFCs & NEVI
- Discretionary Funding [Nov.]
- Look at ZEVs – Not Just EVs
- Look at Multi-Modal ZEV Solutions

Position our Members / Communities to Take Advantage of Discretionary Funding



Contact Information



Dan Janousek

Maryland Department of Transportation

Email: djanousek@mdot.maryland.gov

Rebecca Bankard

Maryland Department of Transportation

Email: rbankard@mdot.Maryland.gov



Maryland
Energy
Administration

Mike Jones

Maryland Energy Administration

Email: mike.jones@maryland.gov



Resources

ZEVIP Webpage

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

MetroQuest Survey

- <https://metroquestsurvey.com/az1f1d>

NEVI Formula Program Guidance

- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/90d_nevi_formula_program_guidance.pdf

Drive Electric

- <https://driveelectricus.com/>

Thank you.