

MARYLAND ZERO EMISSION

Electric Vehicle Infrastructure Council

July 19, 2022

Agenda

- Welcome and Announcements
- Public Comments
- Montgomery County EV Purchasing Cooperative
- National Capital Hydrogen Center Hydrogen Green Print
- PSC PC 44 EV Workgroup Recommendations Filed with PSC
- Maryland State Plan for NEVI Formula Funding Deployment
- ZEEVIC Member Organization Updates
- MarylandEV and Outreach Updates
- Utility Updates
- Closing Remarks



Welcome and Announcements

Deputy Secretary Lewis, MDOT

Announcements

- Federal Electric Vehicle Working Group (EVWG) Paul Verchinsky Nomination
 - The EVWG was established on June 8, 2022, pursuant to the Bipartisan Infrastructure Law. It
 operates in accordance with the provisions of the Federal Advisory Committee Act
 https://driveelectric.gov/work-with-us/
- FHWA Round 6 Designations Hydrogen and Electric
- HOV Sunset September 30, 2022
- Training for the EV Future Ben Kessler, ChargePoint
 - ChargePoint, an electric vehicle charging company, and the National Electrical Contractors
 Association are launching a partnership to train electrical contractors on installing EV charging
 infrastructure.



Public Comments

Montgomery County EV Purchasing Cooperative Update

Brian Booher, Montgomery County

Montgomery County Climate Action Plan

2021 Climate Action Plan Emissions reduction goals:

• 80% by 2027 and 100% by 2035

On-road transportation accounts for 36% of emissions. Strategies include:

- 1. Encouraging greater use of transit, cycling and shared mobility options
- 2. Electrifying public transportation and the County vehicle fleet
- 3. Supporting a transition to zero-emissions vehicles (ZEV) for residents and businesses



What is the EVPC?

The EV Purchasing Co-op offers residents and businesses:

- 1. Negotiated discounts on new and pre-owned vehicles
- 2.Education and information to help you buy an EV, find public charging, install charging, and get incentives
- 3.Events where you can experience EVs and learn from experts
- 4. Electrified Dealership Network of knowledgeable, enthusiastic local dealers





Take the Pledge!

EVPC Pilot Phase launched in January 2022 by challenging residents and businesses to pledge to make their next vehicle electric.

Pilot Phase goal met: Over 1,000 residents took the pledge by May 31

Take the Pledge on our website: www.montgomerycountymd.gov/zev





Electrified Dealers Network

The **Electrified Dealer Network** helps local dealers become "EV Experts" and provide the best possible information to EV buyers.

Benefits for Dealers:

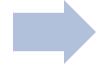
- Training and educational resources on EV technology, available incentives, local programs
- Free promotion on the County's website
- Coordination with the County on events and promotion opportunities
- Qualified EV sales leads from the EV Purchasing Co-op pledges

In the Network today:
25 dealership locations
representing 15 auto
brands

EVPC: What's Next?

The EVPC will leverage pledges to negotiate discounted prices for new and pre-owned vehicles and other special offers from local businesses.

Pilot Phase (Early 2022)



- Launch pledge
- Initial dealership engagement
- Education and promotional events
- Connect buyers to dealers

Phase Two (Late 2022)



- Expand education and events
- Build relationships and evaluate purchasing options w/ dealerships and manufacturers



Purchasing Phase (2023)

- Secure and promote regular deals from dealer partners
- Continue to organize events and education
- Explore ways to expand Co-op to neighboring regions

National Capital Hydrogen Center – Hydrogen Green Print

Richard Moore, Connected DMV





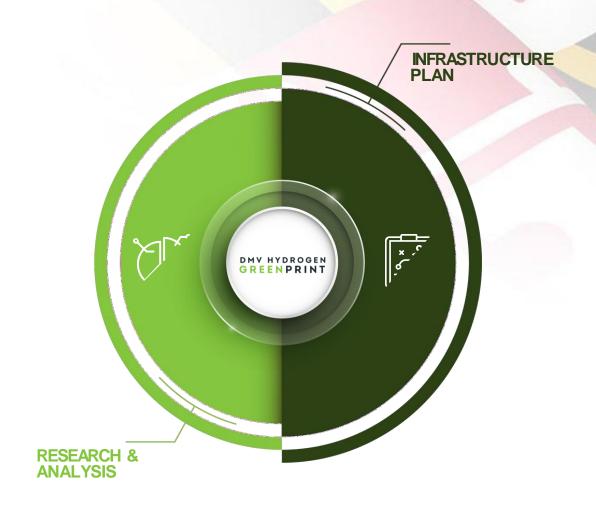


A REGIONAL CAPABILITY, ALIGNED WITH THE NATIONAL IMPERATIVE 3



connecteddmv.org/hydrogen

THE REGIONAL HYDROGEN ASSESSMENT 4



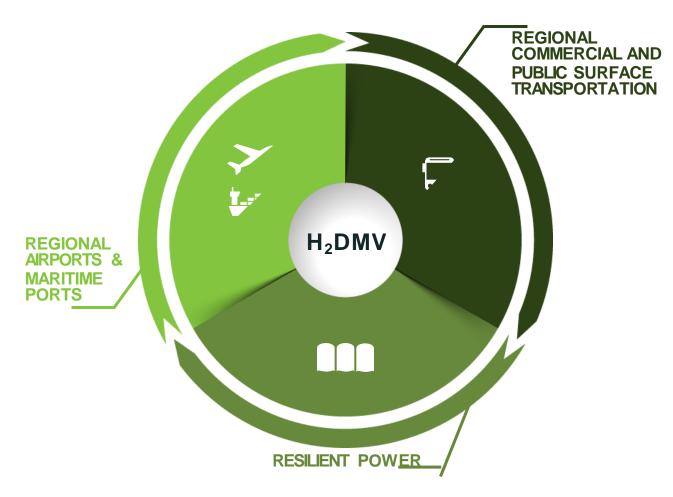


DMV HYDROGEN

GREENPRINT

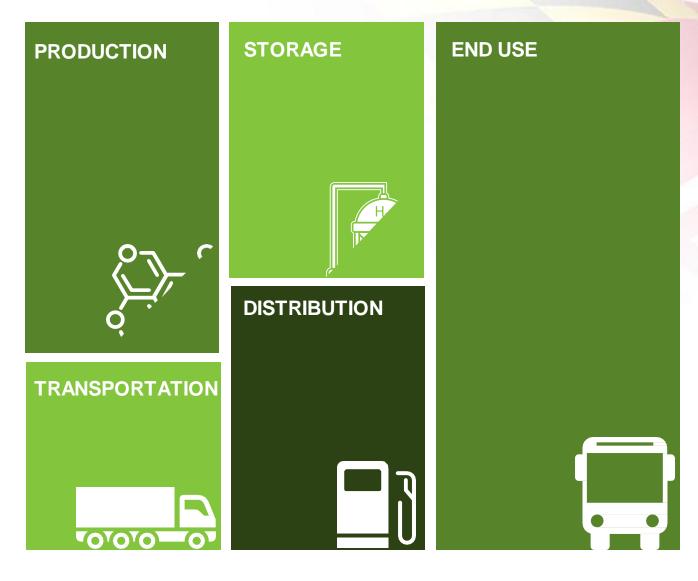
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H₂DMV PROJECT FOCUS AREAS 5



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Metropolitan Washington Washington Gas The 2030 Group **Bloom Energy Dominion Energy** Exelon **Council of Governments** Mallik Angalakudati **Bob Buchanan** Rick Beuttel Geovanni Castano Sunny Elebua Chuck Bean U.S. Dept of Washington **Natural Resources** Universal Hydrogen **Metropolitan Area** DC Water **Transportation Office of Plug Power Defense Council** Innovation **Transit Authority Paul Eremeko Rick Mason David Gadis** Rachel Fakhry Melissa King* Daniel Lee Metropolitan **U.S. Dept of Energy:** Cybersecurity & **BWI Marshall Airport Loudon County, VA Washington Airports** Office of Energy Efficiency & Maryland Aviation Virginia Tech Infrastructure Security **Economic Development Authority** & Renewable Energy **Administration** Agency Steven McKnight **Buddy Rizer** William Ryan* Dr. Sunita Satyapal* **Jack Potter Ricky Smith Waltzing Matilda** George Mason K&L Gates **Connected DMV** Accenture Pepco Aviation University (Connect Airlines) **David Wochner Stu Solomon Scott Tinkler** Dave Velazquez Dr. Gregory Washington **John Thomas** Constellation **State Agency**

*EX-OFFICIO, NON-VOTING

Colleen Wright

TBD





connecteddmv.org/hydrogen



Learn more at: www.connecteddmv.org/hydrogen

Richard Moore VP, Climate and Energy richardmoore@connecteddmv.org THANK YOU FOR YOUR INTEREST-PLEASE GET IN TOUCH!

PSC PC 44 EV Workgroup

Amanda Best, PSC

PSC: Fleet Subgroup

- Subgroup met 5 times between 3/1/22 and 6/28/22
- Discussed support for fleet electrification, fleet studies, EV transition planning, challenges and opportunities for fleets, hydrogen and electric fueling stations, state programs, programs in other states, and private financing for fleets.
- Filed final fleet proposal from BGE, Pepco, and Delmarva on 6/30
- Will be reviewed at Commission Administrative Meeting (7/27)

PSC: Fleet Subgroup

	BGE	Pepco	Delmarva	Total
Fleet Assessments	50	35	15	100
Make-Ready Incentives	100	70	30	200
EVSE Incentives	100	70	30	200
Total	250	175	75	500



PSC: Reliability

- Work group has met 4 times between 2/10/22 and 7/6/22 to discuss reliability standards and utility reporting
- Discussed the limited number of existing standards in other states, the available data from the utilities in the pilot, and potential ways to calculate uptime and reliability
- Finalizing interim work group report for filing before August 1 recommending reliability reporting begin in February 2023

PSC: EV Metering

- Subgroup has met 3 times between 2/9/22 and 6/9/22
- Discussed the COMAR waivers approved for the Pilot, EVSE requirements in Handbook 44, a draft straw proposal, and questions around metering standards for the utilities and EV meters
- An updated straw proposal was circulated to the Subgroup on 7/5 with the next meeting 8/9.
- A final report is due 12/31/23



PSC: Rate Design

- Work group has met 3 times between 3/10/22 and 4/28/22 to continue discussions on commercial EV rate design
- Picked Arizona Public Service Company Rate Rider for DCFC to use as template for potential MD rate for Commission consideration
- The utilities and EV charging companies are working together to finalize a rate proposal for the work group's review at a future meeting
- Goal of filing a final proposal with Commission in 2022

PSC: Make-Ready, Carshare, Charging + Other Technologies

- Work group has met 3 times between 3/17/22 and 7/11/22 to the combined topics of make-ready, carshare programs, pairing EV charging with other technologies, and Pilot education and outreach
- Interest expressed potentially pursuing proposals for the topics above, but not enough consensus to do so prior to pilot ending
- Will wrap these issues into discussions to begin later this year on what's next after the Pilot and file status report with Commission by August 1



Dan Janousek, MDOT Rebecca Bankard, Michael Baker International

NEVI Overview





What are ZEVIP and NEVI?

Maryland Zero Emission Vehicle Infrastructure Plan (ZEVIP)

NEVI FORMULA FUNDING • Required by 8/1 • Unlocks ~\$60M in MD • Must use on AFCs 1st then Communities • Submitted Annually • 10% set-aside for national grant program NEVI PROGRAM • High-Level in Plan

Details are Developing on Administration and Application

DISCRETIONARY \$ for ZEV

- \$2.5B of the \$7.5B under BIL
- \$1.25B for Corridor ZEV infrastructure along AFCs (EV, hydrogen, propane, natural gas)
- \$1.25B for Community ZEV infrastructure
- Guidance Est. Late 2022

OTHER STATE PROGRAMS

- VW Settlement
- Clean Fuels Technical Assistance Program
- MD Smart Energy Communities
- Solar Canopy Grant Program
- MEA EVSE Program

OTHER FUNDING

Other Federal

- DOT
- DOE
- EPA

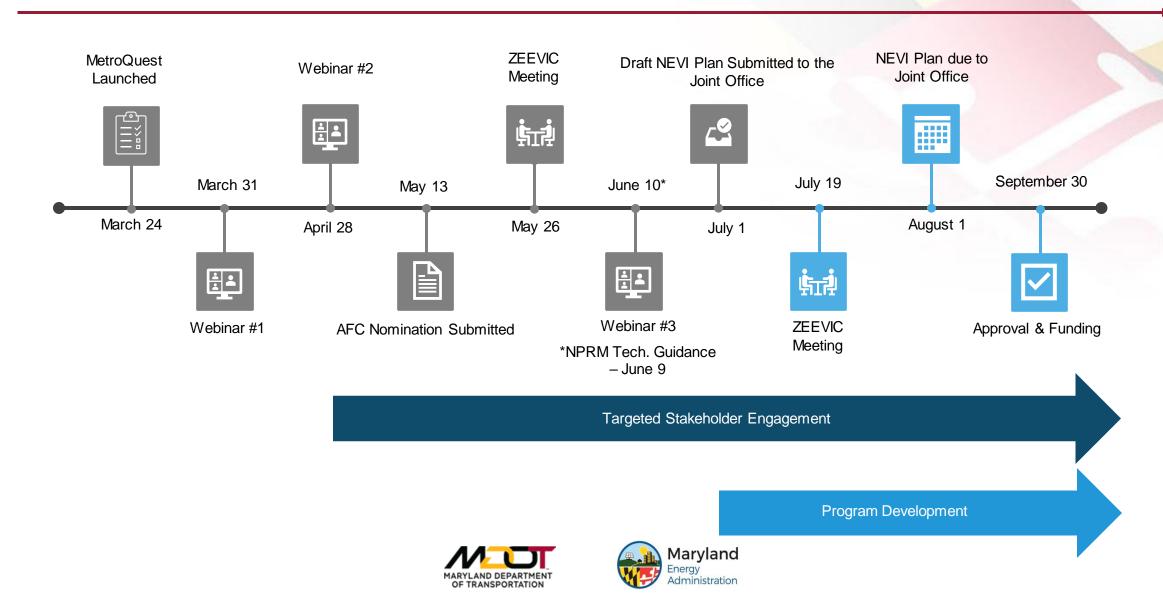
Private / Other Investment

- Site Hosts
- Network Companies
- PSC Pilot Program / Utility Investment





NEVI Schedule (Subject to Change)



NEVI Submittal

- Submitted to Joint Office July 15th
- Available on ZEVIP Website
 - https://evplan.mdot.maryland.gov/







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





Plan Vision and Goals

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

Alternative Fuel Corridors

Certify existing (23) corridors within 5 years and identify future roadways



Build & Strengthen Public-Private Partnerships

Facilitate contracting and implementation



Prioritize disadvantaged and rural communities



Collaboration

Work with state, local, regional, NGOs, and public organizations and plans



Provide 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.









Risks & Challenges

Supply Chain

Equity Barriers

Emergency Management

Compatibility

ADA Accessibility

Grid Capacity

Public Education

Reliability

Workforce Development

Climate Change





Equity Considerations



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





Public Engagement and Stakeholder Outreach





Engagement & Outreach











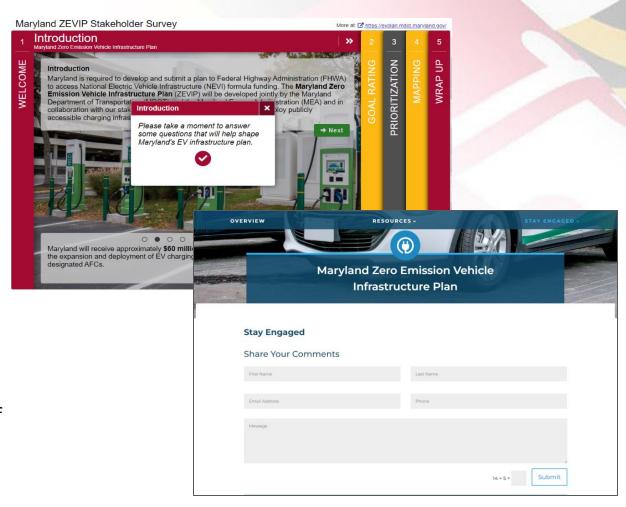






Outreach To Date

- Website
 - •2,070 Page Views | 987 Unique Visitors
 - Maryland EV | ZEEVIC StoryMap | Maryland EV Journey
- MetroQuest Survey
 - 293 Participants
- Webinars
 - 3 Webinars
 - > 300 Participants
 - All Webinar Polling Summarized on ZEVIP Website
- Presentations
 - ZEEVIC | Commuter Choice Maryland | MPOs | Council of Governments | Non-Profits







Continuing Outreach

- Public Feedback
 - ZEEVIP Website | ZEVIP Toolkit | NEVI Plan | Program
- Maryland ZEVIP Planning Toolkit
 - Maryland Location-Based Overview
 - Maryland Site Information Tool
 - Corridor & Community Charging
- Targeted Stakeholder Outreach
- ZEEVIC Outreach Activities
 - 6 Events in 2022
 - 25 Past Events
 - 7,370 Touchpoints | 2 Languages







Maryland ZEVIP Planning Toolkit





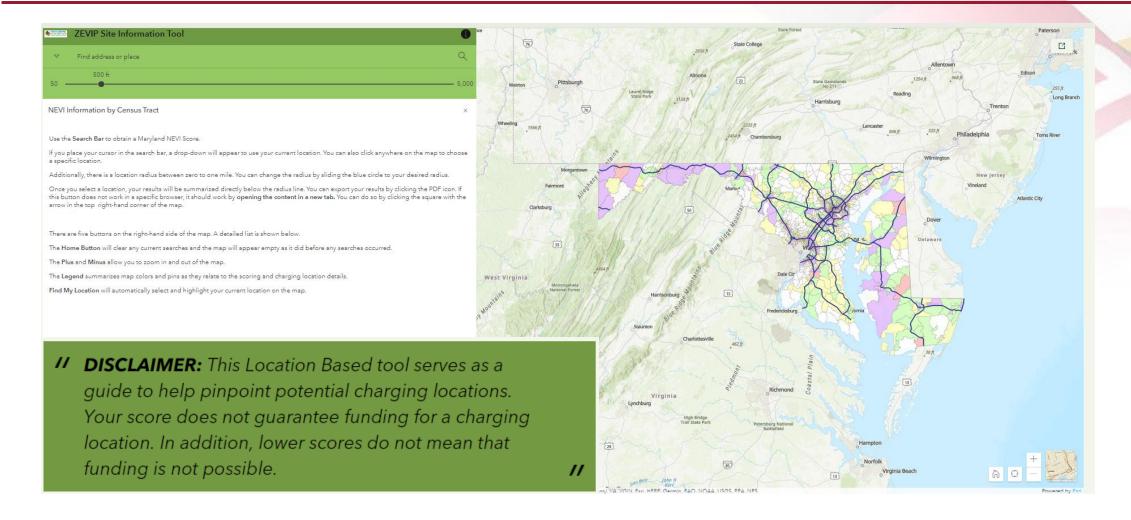
Objective Driven Scoring Criteria

Environmental Justice		Transportation		Land Use/Overlays			Electric Vehicles/Existing Infrastructure	
Layer Name	Score	Layer Name	Score	Layer Name	Score		Layer Name	Score
Overall Score (UMD/MDE -EJSCREEN)		Distance to Highway		Transit Oriented Developments			Optimal Stations (Gov. Survey)	
Top 90th Percentile	8	Within 1 Mile Buffer	10	Yes	1		Yes	1
75th-89th Percentile	6	>1 Mile Buffer	0	No	0		No	0
50th-74th Percentile	4	EV Alternative Fuel Corridor		Priority Funding Area	Priority Funding Area		ZEVIP MetroQuest Survey (within Census Tract)	
<49th Percentile	0	Interstate	4	Yes	1		5-16 Selected Locations	3
Designated Rural Area		US Route	2	No	0		2-4 Selected Locations	2
Yes	6	State Route	1	Maryland Sustainable Commun	ities		1 Selected Location	1
No	0	VMT/AADT		Yes	1		0 Selected Locations	0
Justice 40		Rank 1	3	No	0		EV Stations within Census Trac	ct
Yes	2	Rank 2-4	2	Land Uses - 2010			7-39 EV Stations	2
No	0	Rank 5	1	High Density Residential	7		1-6 EV Stations	1
Historical Distadvantage Comm	unitites			Medium Density Residential	3		0 EV Stations	0
Yes	2			Low/Very Low Density Residential	1		Density of EV Owners	
No	0			Commercial	7		>300	4
Overall Score (CDC SVI)				Institutional	6		150<->300	3
> 0.75	2			Industrial	5		76<->150	2
< 0.75	0			Other	0		1<->75	1
							0	0





Draft Maryland Site Information Tool







Critical Considerations – Outside Current GIS

- Resiliency
 - Floodplain
- Amenities
 - Restrooms | Food/Dining/Retail | Lighting | Other Services
- Utility Providers / Grid Capacity
- Innovations
 - Solar | Storage | Mobile Charging
- Cost
 - Competitive Pricing
 - Matching Considerations
- Supports greater deployment efforts
 - Corridor AND Community Charging



Fully solar-powered EV charging station deployed for CALtrans.





Next Steps





Program Development

- Competitive Grant Program
 - Administered by MDOT
- Short-Term Focus: AFCs
- Long-Term Focus: Communities

40-45 Sites to Build-Out AFCs \$350K - \$1 Million per site

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		





First Round

- End of Year 2022/Early 2023
- Limited Scope
 - Focus on build-out of specific corridors
 - Emphasis on Rural/DACs
- Time-limited
 - Not rolling submission
- Risks
 - Supply chain
 - Local approvals





Questions?





ZEEVIC Member Organization Updates

State Agencies

MDE Program Updates

Approved by Governor's Office

Plan is due to be released July 27th

Volkswagen Settlement Updates **EVSE Infrastructure Programs** Phase II Currently in final stages of review process Hope to make announcements in August MDE received 77 proposals (47 ECGP, 30 CAGP) Approx. \$12.6 million in total requested funds Observations: Much better geographic distribution that Round 1 (particularly east and west) Powerlevels are higher than Round 1 Regional Medium Heavy-Duty Action Plan Plan has been finalized



MEA Program Updates

- EVSE Rebate Program
 - FY23 funding open, will take time to clear out FY22 backlog.
 - Already have \$400K of applications in the queue.
- Clean Fuels Incentive Program (CFIP)
 - FY22 Round 2- 4 awards totaling \$3.9M
 - Chaney Enterprises-\$900K to purchase and deploy 6 electric concrete-mixer trucks at 3 locations in Anne Arundel and Prince George's County.
 - Sysco-\$1.5M to purchase and deploy 10 Class 8 electric tractors in Jessup, company's first such deployment on East Coast.
- Clean Fuels Technical Assistance (CFTA) Program
 - Announced on 6/6, application period opened on 6/20.
 - Indicated interest but no received applications yet.



Additional State Agencies

- MDP
- Commerce
- DGS



ZEEVIC Member Organization Updates

EVADC and Annapolis Green



ELECTRIC VEHICLE ASSOCIATIONOF GREATER WASHINGTON DC

Serving EV Drivers in Maryland, Northern Virginia and the District of Columbia

<u>evadc.org</u> Local non-profit chapter of the Electric Vehicle Association. Partner organizations Annapolis Green, Poolesville Green







Our Mission: Public outreach and education for and by real EV owners

EVADC's Electric Vehicle Year 2022

Jan: DC Auto Show. We used to be the only EV's in the building. No more! EVADC offered volunteer support for PHI EV Smart

Mar: MoCo Go Electric! Worked with Annapolis Green

April: Drive Electric Earth Day. We had member cars at

- Einstein HS, Kensington, Sherwood HS, Sandy Spring
- Kick Gas in Annapolis, helping Annapolis Green
- MoCo GreenFest, helping Poolesville Green
- Rockville Science Day, Olney Days Parade

Sept: National Drive Electric Week.

- Poolesville Day, helping Poolesville Green
- Kick Gas in Annapolis, helping Annapolis Green
- Smaller, local farm markets, others





Ongoing EVADC Efforts

Worked with Cher Taylor and Sincerrai Gentry of Electrification Coalition to help promote Montgomery County EV Purchasing Co-op. Currently working with Brian Booher, MoCo Dept of Environmental Protection.

Brought member EV's to FeBREWary breweries to supplement MoCo DEP table.

Made a series of "**EV Charger of the Week**" videos, focused on Montgomery County.

https://youtube.com/playlist?list=PLffuhWGR229BXk8Y2nGsT3fD5FPs6wz-F

Public **Ask An EV Owner** monthly zoom meeting. Would an EV work for me? What should I buy? How will I charge it? https://evadc.wildapricot.org/Ask

Our famous **EV Info Sheet!** Now there's room only for EV's. We're no longer updating plug-in hybrids. https://evadc.wildapricot.org/EVInfo



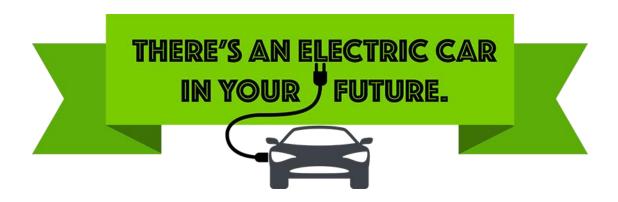






EV Advocacy Update

Elvia Thompson, Annapolis Green









Ask me why I drive electric!

Annapolis Green's first EV event, in partnership with EVADC, was held ten years ago at City Dock as part of "National Plug In Day" when there was almost no charging infrastructure and EVs were a curiosity.

In subsequent years, we continued presenting EV showcases during National Drive Electric Week and Drive Electric Earth Day in various locations in Annapolis partnering not only with EVADC but also with BGE.





KICK GAS! IN ANNAPOLIS

A few years ago we made driving electric a vital part of our climate change messaging in talks and written communications and rebranded our events with the Kick Gas logo and the tagline "There's an electric car in your future."



We have continued presenting EV showcases during National Drive Electric Week and Drive Electric Earth Day each year in various locations in Annapolis partnering not only with EVADC but also with BGE.

Our events have included mini seminars and demonstrations in addition highlighting other electric mobility such as electric bicycles and motorcycles and boats.



Onnopolis Green Advocates for Driving Electric



We regularly give talks about driving electric at libraries and for other organizations and always connect the topic to climate change. Our website contains information about driving electric and links to marylandev.org among other resources.

On Earth Day 2022 we closed a block of West Street for our show and worked together with the local business association so that plein air painters were part of the event and restaurants served al fresco during the show driving the public to the EVs.

In September we plan to present our largest and most comprehensive show yet at Annapolis Town Center with seminars, ride and drives, and various partners including EVADC. There is no question that our continued advocacy has convinced many people to ditch the ICE cars and drive electric.



MarylandEV.org and Outreach Updates

David Proctor, Sharp & Company

New In Person Outreach Materials

New Outreach Booth & Banners



New Postcard Handout



Front





1,200 Interactions!













Diverse Visitors













Next Outreach Event



Baltimore Washington One Carnival

☑ July 9, 2022

Washington County Fair

□ July 23, 2022

Wicomico County Fair

☐ August 20, 2022



Potential Outreach Events Sept - Oct



Heritage Days

□ September 10, 2022

Maryland Wine Festival

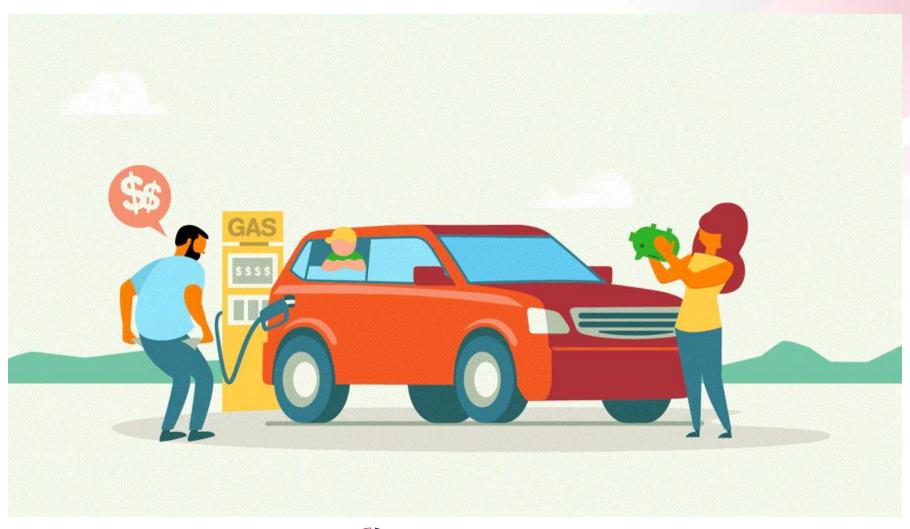
☐ September 17, 2022

St. Mary's County Fair

□ September 24, 2022

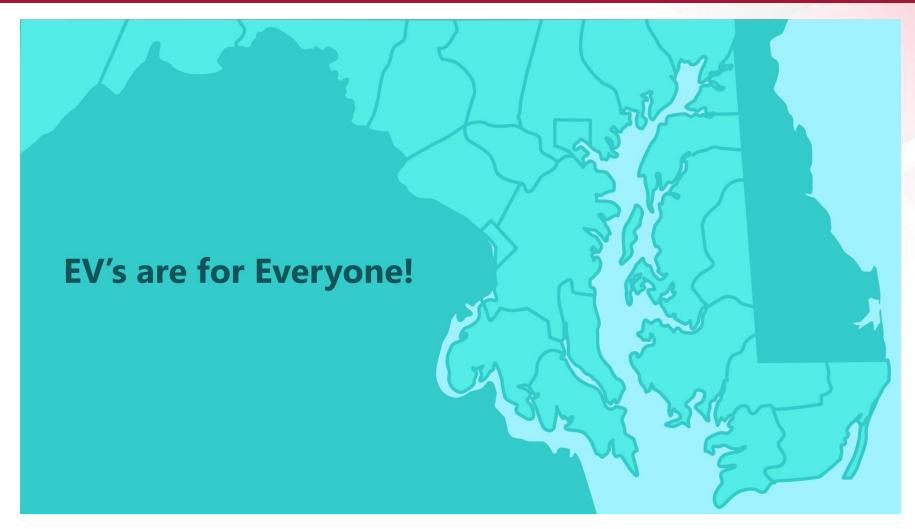


Maryland EV Paid Social/Geofence Ad 1





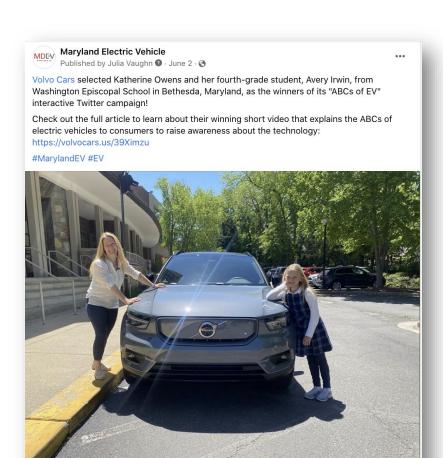
Maryland EV Paid Social/Geofence Ad 2





Maryland EV Social Media Post Examples

June-July 2022



1 +1.6x higher

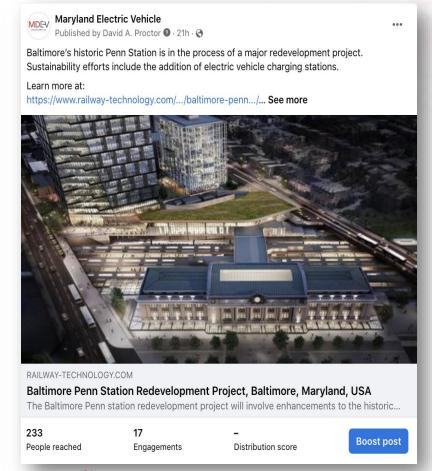
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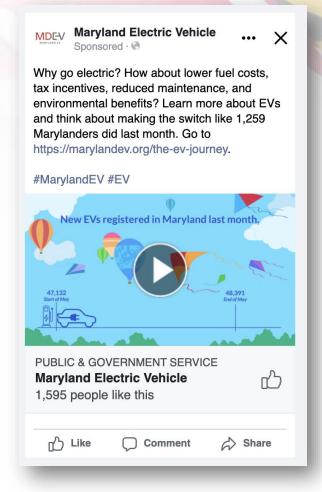
Boost post

25

Engagements

People reached







MarylandEV.org Updates

Header Updates for EV 101, EV Charging, and Incentives





Whether you're considering switching to an electric vehicle (EV) or just curious about your options, we're here to help



Incentives

See how much you can save by going electric!



EV Charging – Types of Chargers

Charging your EV is just as easy as pumping gas. Where, when and for how long depend on what



Utility Updates

BGE, PHI, SMECO, Potomac Edison

BGE

- EVSE Pilot Program Update
 - Residential: 1,931
 - Multifamily: 170 ports
 - Public: 217 live, 216 in progress
 - TOU Rate: 1,038 participants
- Events & Outreach
 - 25 EVs for Lyft delivered and available to rent
 - Planning a Lyft event in Johnston Square tentatively Oct 7th
 - Maryland Zoo ZooBOOO October 29-30th
 - Drive Electric Week events Sept/Oct



PHI

MD EVsmart Incentive and Rebate Programs`						
Program	Jurisdiction	Program Target	Current			
			Enrollment/Installations			
Residential	Pepco MD	750	750			
Rebate	DPLMD	250	74			
R-PIV TOU	Pepco MD	No Limit	346			
Rate	DPLMD	No Limit	6			
Residential	Pepco MD	100	15 (42 applicants in			
Plug-in			review pipeline)			
Vehicle TOU	DPLMD	37	2 (5 applicants in the			
(PIV)			review pipeline)			
Multi-	Pepco MD	100	14 (26 ports installed; 13			
Dwelling			applicants in review			
(MDU)			pipeline)			
Incentive	DPLMD	25	0 (5 applicants in review			
			pipeline)			
Off Peak/Off	Pepco MD	250	250			
Bill Rebate	DPL MD	75	38			

MD EVsmart Public Chargers – In Service						
L2 Charger DC Fast Charger Total						
Рерсо	101	3	104			
DPL	70	5	75			
Total	171	8	179			

MD EVsmart Pipeline Status – Public Chargers						
	Sites	Chargers				
Pre-Construction / In Construction	9	20				
Engineering	33	106				
Total	42	135				

- Events & Outreach
 - Wicomico County Fair Aug 19th-21st
 - National Drive Electric Week Poolesville Day Event Sept 17th



SMECO

- EVSE Pilot Program Update
 - 27 EVSE Installed (24 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
 - Working on October event



Potomac Edison

- EVSE Pilot Program Update
 - Residential Rebates: 291
 - Multifamily: 6
 - Public: 21 Level 2, 8 DC Fast
 - TOU Rate: 463 participants
- Events & Outreach
 - MUD Ribbon Cutting on July 23, 2022
 - EV Charging Webinars with EVA and MMHA on August 10, September 28, and November 9, 2022
 - Sponsoring Poolesville Day National Drive Electric Event on September 17, 2022



Closing Remarks

