

Electric Vehicle (EV) Readiness Plan

Mayor and Council Work Session
February 24, 2025



<https://engagerockville.com/evplan>

Outline

- Introduction
- Requested Feedback
- Plan Background and Purpose
- Community Engagement & Feedback
- Charging Projections and Needs
- Recommended Goals and Action List
- Next Steps
- Requested Feedback
- Questions



Plan Introduction and Purpose

1. Recommended by Climate Action Plan and Comprehensive Plan
2. Reduce transportation greenhouse gases emissions and air pollution
3. Join with multiple levels of government in facilitating rapid EV adoption
 - Montgomery County (2022-2024)
 - COG regional plan(s) (2022-2024)
 - Maryland Zero Emission Vehicle Infrastructure Plan (2022-2024)
 - Eligibility for federal infrastructure funding (2022-2026)
4. Examine community needs and local government roles to identify ways to improve:
 - building codes, zoning code, policies and plans, electrical permitting, fleet, outreach, grants to sponsor community charging, partnerships, equity

Requested Feedback

- 1) Which of the following option(s) for right-of-way/curbside charging does the Mayor and Council support?
 - a) Vendor Installed Charger
 - b) Resident Installed Charger
 - c) Resident Installed Charging Duct/ Cord
 - d) Charging cord guidelines
- 2) Does the Mayor and Council support flexibility in the Zoning Code's parking space minimums to accommodate accessible aisles in EV charging retrofits of existing parking lots?
- 3) Which philosophy does the Mayor and Council prefer for setting a user rate for future city owned and operated charging stations?
 - a) No Fee/Free Charging
 - b) Cost Recovery
 - c) Revenue Generation

EV Readiness Plan Scope



EV Overview and Charging Assessment: Existing and projected EV registrations and charging needs



Community Engagement: Online Survey, Crowd Source Mapping and Outreach Sessions



Equity Assessment: Identify barriers and strategies for equitable EV and charging access



Policy, Code, Permit Review: Zoning, building codes, permitting, EV policies and standards



Costs and Funding Sources: EV charging costs, funding opportunities, business models for public and private charging



Fleet: City fleet electrification and charging plan



Action Plan: 4 EV Readiness Goals with 26 Actions to reduce barriers, expand charging access, and build EV readiness

Community Engagement

Element	Timeline	Details
Boards & Commissions Consultations	12/2022-Ongoing	Recreation & Park Advisory Board plus Commissions: Environment, Transportation & Mobility, Planning, Human Services Advisory, Human Rights
EV Engagement Webpage	12/2022-Ongoing	Plan public engagement platform
Virtual Open House	12/8/2022	22 participants
Online Public Surveys	12/2022-1/2023	255 participants (Residents, Large Property Owners/HOAs, and Employees)
Crowd Sourced Charger Needs Map	12/2022-1/2023	203 suggested charging locations
In-Person Tabling at Community Centers	12/2022-1/2023	21 at Twinbrook Community Center 34 at Lincoln Park Community Center
Montgomery County Online Public Survey	2/2023-6/2023	592 online survey participants with 620 suggested charging locations (including 10 Rockville locations)
Regional Coordination	1/2023-Ongoing	Plan and grant coordination (Maryland, Maryland Clean Energy Center, Metropolitan Washington Council of Governments, Montgomery County)
Draft Plan Open House	10/10/2024	29 participants reviewed draft results and recommendations
Draft Plan Public Comments	January 2025	15 public comments submitted

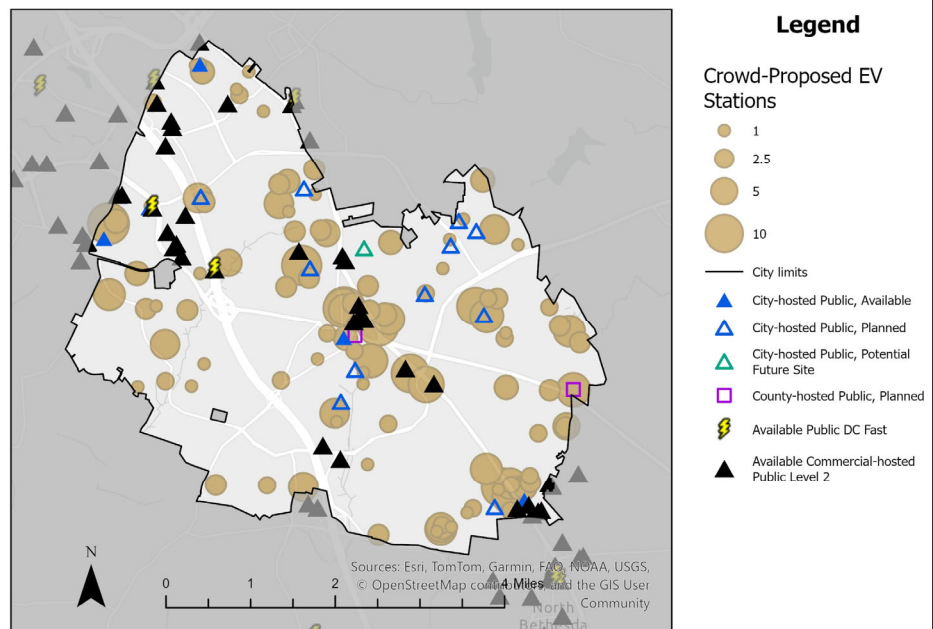
Community Feedback Themes

1. Costs of vehicles, chargers, installation
2. Questions about EVs, charging technology, and the city's role
3. Charging for multi-unit and shared residential parking
4. Charging for homes lacking garages or driveways
5. Accessible charging
6. Unclear plan/permitting process to install charging
7. Charging gaps

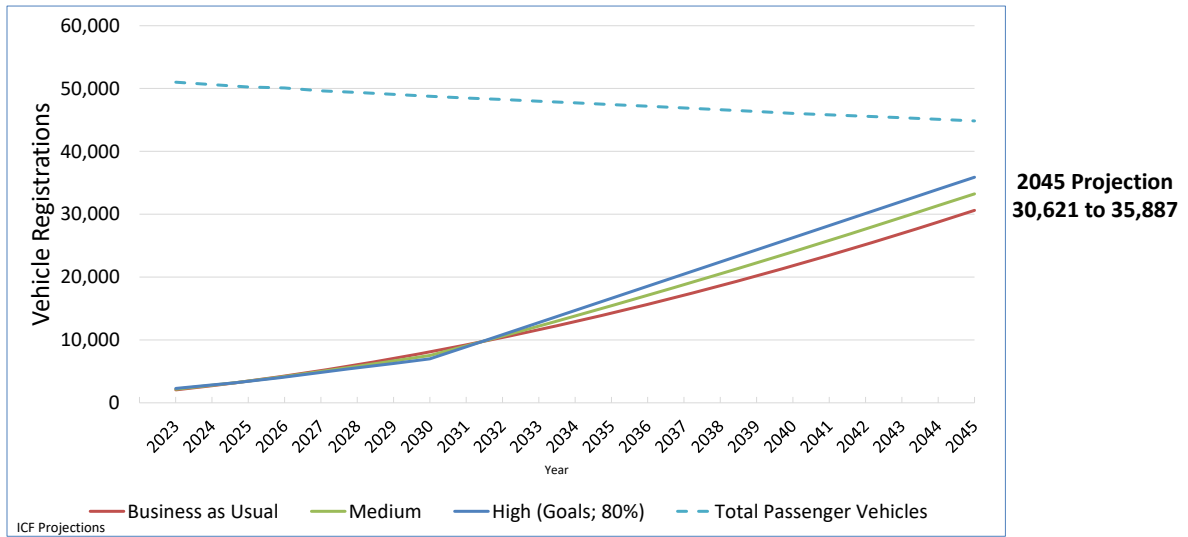
Community Suggested Public Charging Locations

Top Requests

- Rockville Town Square
- Swim & Fitness Center
- Civic Center Park
- Richard Montgomery HS
- Twinbrook Library
- Rockville Metro
- Fallsgrove Village Center
- Congressional Plaza/ Congressional South
- Ritchie Center
- Wintergreen Plaza



Projected EV Registrations (2023-2045)



Projected EV Charging Needs (2025-2045)

Scenario			2025	2030	2035	2040	2045
Business as Usual (BAU)	EVSE Needs (port count)	Single Family	2,292	5,753	9,930	15,160	21,322
		Shared Private	172	455	725	1,107	1,557
		Public Level 2	214	585	919	1,403	1,973
		Public DC Fast	9	35	45	70	98
		Total Ports	2,686	6,828	11,619	17,738	24,949
	EVs to Support		3,441	8,083	14,260	21,771	30,621

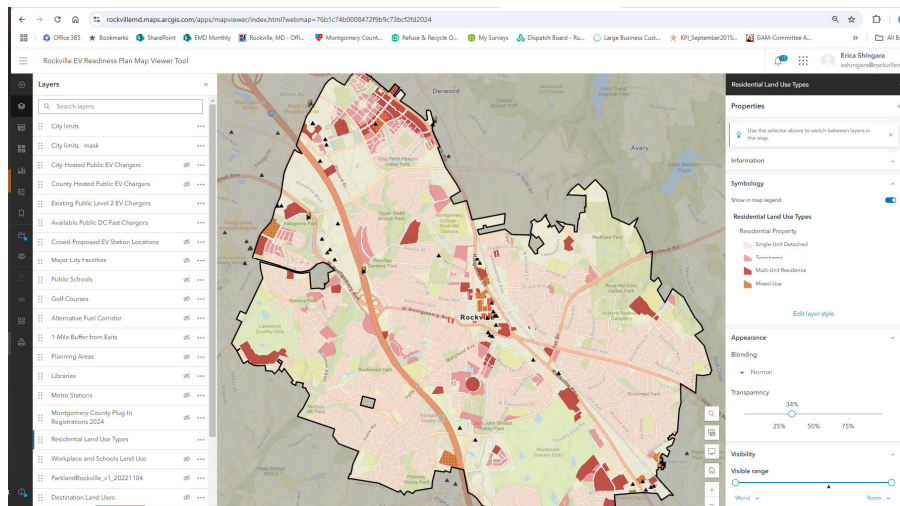
ICF Projections based on U.S. Department of Energy's Electric Vehicle Infrastructure Projection Tool (EVI-Pro Lite).

EV Charging Needs Pyramid



Argonne National Laboratory, Building the Charging Pyramid: What Cities Can Do to Grow the Market, <https://slideplayer.com/slide/15705047/>

Rockville EV Readiness Plan Mapping Tool



<https://rockvillemd.maps.arcgis.com/apps/mapviewer/index.html?webmap=76b1c74b0008472f9b9c73bcf2fd2024>

EV Readiness Goals



Action List – EV Ready Codes, Policies and Procedures

1.1	Update City Codes	Lead/Partners	Timeline
1.1.1	Update the Building and Property Maintenance Regulations (Chapter 5)	CPDS, PW	Adopted in May 2024, monitor and refine.
1.1.2	Update the Forest and Tree Preservation Ordinance (Chapter 10.5)	CPDS, PW, R&P	Proposed in May 2024, adoption anticipated in 2025.
1.1.3	Update the Streets, Roads, Rights-of-Way, and Public Improvements Code (Chapter 21)	PW	In progress
1.1.4	Update the Traffic Code (Chapter 23)	PW, Police	Short-term (0-3 years)
1.1.5	Update the Zoning Ordinance (Chapter 25)	CPDS, PW, R&P, Consultant	Community calibration In progress, possible adoption Summer 2025/Spring 2026)

Action List – EV Ready Codes, Policies and Procedures – continued

1.2	Develop guidelines and standards	Lead/Partners	Timeline
1.2.1	Develop a simplified EV charging application and guide to streamline plan review, permitting and inspections	CPDS, PW, R&P	Short-term (0-3 years)
1.2.2	Develop right-of-way EV charging guidelines and a streamlined approval process to serve residents without access to garages, driveways or dedicated parking spaces	PW, CPDS, R&P, Consultant	Short-term (0-3 years)
1.2.3	Establish design standards for public EV charging stations	CPDS, PW, Consultant	Short-term (0-3 years)
1.3	Advocate for safe, reliable, affordable and equitable electric mobility	Lead/Partners	Timeline
1.3.1	Advocate for government and utility policies and programs to support EVs and e-micromobility opportunities.	PW, CMO, M&C, MML	Ongoing

Action List – Robust & Equitable Charging Network

2.1	Robust and Equitable Charging Network	Lead/Partners	Timeline
2.1.1	Engage with residential properties to expand access to home charging	PW, HCD, PIO, Partners	Short-term (0-3 years); Underway
2.1.2	Engage with commercial properties to expand access for workplace, fleet, and destination charging	PW, REDI, CPDS, Partners	TBD
2.1.3	Coordinate with Montgomery County to expand public charging	PW, Montgomery County	Ongoing
2.1.4	Coordinate with Pepco to expand public charging and ensure grid capacity for charging	PW, R&P, CPDS, Pepco	Ongoing
2.1.5	Identify City-owned properties and rights-of-way in gap areas and leverage outside funding and partnerships to expand public charging infrastructure	PW, R&P, CPDS,	Ongoing
2.1.6	Promote EV infrastructure to support other e-mobility opportunities , such as e-bikes, e-scooters, EV ride-hailing, or EV car-sharing services	PW, PIO, Montgomery County	Ongoing

Action 2.1.5 City Planned Public Charging

5 sites completed, 10 planning
8/15 sites pending federal funding

Site Name	Address	Site Type	Site Description	Funding Sources/ Partnerships	Level 2 Ports	DCFC Ports	Category	Status
City Hall/ Vinson St.	Vinson Street	Right-of-way	Near employment, destination and multi-unit residential developments	Pepco	2		Public	2 Complete
Rothgeb Maintenance Facility (Gude)	14625 Rothgeb Dr.	City Facility	City's Maintenance Facility, to serve light, medium, and heavy-duty City Fleet vehicles, employees, and the public	CIP + MEA	6	TBD	Fleet/Public	2 Complete 4+ Planning Part of Space Plans Complete
Thomas Farm Community Center	700 Falls Grove Drive	Community Facility	Located near multi-unit residential development	Pepco	2	2	Public	Complete
Mattie J.T. Stepanek Park	1800 Piccard Drive	Community Facility	Located near multi-unit residential development	Pepco	4		Public	Complete
Falls Grove (Prettyman Drive)	312 Prettyman Dr	Right-of-way	Located near multi-unit residential development	Pepco	3		Public	Complete
Twinbrook Station (Bouic Ave.)	1800 Bouic Ave	Right-of-way	Located near multi-unit residential development	Pepco	4		Public	Complete
6 Taft Court	6 Taft Court	City Facility	Office building undergoing renovations will be future offices for emergency operations center, public works, and recreation and parks staff.	CIP + MEA	4-6		Fleet/Public	Design
Rockville Swim and Fitness Center	355 Martins Lane	Community Facility	Located in the parking lot of a community recreational facility located within one mile of a highway exit of a designated Alternative Fuel Corridor	CFI Grant (corridor)		4	Public	Planning
Senior Center	115 Carnation Dr.	Community Facility	Located in the parking lot of a community recreational facility serving residents aged 60 and older. Chargers would serve members and visitors, and employees.	CIP + MDOT Carbon Reduction Grant + County	4		Fleet/Public	Planning
Blandford Street ROW	504 Blandford St.	Right-of-way	Located in right of way near Park Terrace Apartments, multi-unit apartment buildings.	CIP + MDOT Carbon Reduction Grant + County	2		Public	Planning
Rockville Civic Center Park	603 Edmonston Dr., Avery Rd.	Community Facility	Located in the parking lot of a community recreational and historic property and rental facility, a regional destination	CIP + MDOT Carbon Reduction Grant + County	4		Public	Planning
East Jefferson ROW	1647 E Jefferson St.	Right-of-way	Located on right of way near Rollins Park Apartments, a multifamily residential development	CIP + MDOT Carbon Reduction Grant + County	2		Public	Planning
Charles Street/McArthur Dr. ROW	301 Charles St/McArthur Dr.	Right-of-way	Located in right of way near East Rockville neighborhood near several multi-unit apartment buildings.	CIP + MDOT Carbon Reduction Grant + County	2		Public	Planning
College Parkway/Yale Place ROW	438 College Parkway	Right-of-way	Located in right of way near Scarborough Square, a low-income residential development managed by Rockville Housing Enterprises.	CIP + MDOT Carbon Reduction Grant + County	2		Public	Planning
RHE David Scull Courts	1201 1 st Street	Residential	A low-income housing development managed by Rockville Housing Enterprises	Citizen Energy/MCEC	4		Residents	Planning

Action List – Clean Municipal Fleet

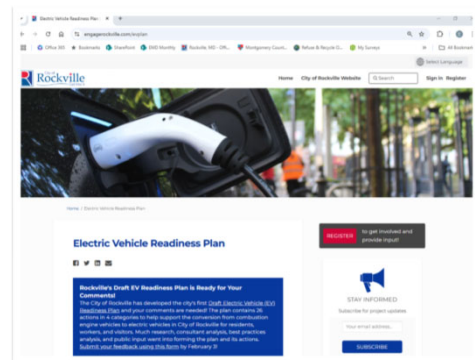
3.1	Electrify eligible vehicles and equipment	Lead/Partners	Timeline
3.1.1	Replace eligible non-emergency light-duty fleet with electric vehicles	PW, All	Underway
3.1.2	Monitor and pilot clean technologies for medium-duty and heavy-duty vehicles	PW, R&P	Planning
3.1.3	Monitor and pilot clean vehicle technologies for police vehicles	Police, PW	Planning
3.1.4	Monitor and pilot clean technologies for off-road equipment	PW, R&P	Underway
3.1.5	Coordinate an interdepartmental clean fleet team for training and management	PW, All	Ongoing
3.2	Deploy electric charging infrastructure	Lead/Partners	Timeline
3.2.1	Implement the Electric Vehicle Charging Infrastructure Capital Improvement Plan (CIP GA23)	PW, R&P, CPDS	Ongoing
3.2.2	Leverage outside funding and resources to support fleet EV electrification and infrastructure planning, design and installation	PW, R&P, Partners	Underway
3.2.3	Operate, maintain and manage EV charging infrastructure	PW, R&P, Contractors	Ongoing, may expand with increased chargers

Action List – Public Engagement & Oversight

4.1	Outreach and Engagement	Lead/Partners	Timeline
4.1.1	Coordinate with community partners to conduct an inclusive public education and engagement campaign on electric vehicles and charging infrastructure	PW, PIO, Partners	Ongoing
4.1.2	Promote the regional electric vehicle purchasing cooperative (EVPC) to increase the scale and rate of EV adoption	PW, PIO, Montgomery County, Partners	Ongoing
4.2	Executive Plan and Monitor Progress	Lead/Partners	Timeline
4.2.1	Monitor and report EV Readiness Plan progress through the Climate Action Plan annual report	PW	Annual

Next Steps

- Staff will revise the plan to address changes from tonight's worksession
- Staff intends to bring back the revised plan on **March 24, 2025** for Mayor and Council final direction and/or possible adoption

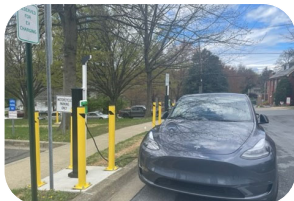


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Requested Feedback

Questions	Related Actions
1) Which of the following option(s) for right-of-way/curbside charging does the Mayor and Council support? a) Vendor Installed Charger b) Resident Installed Charger c) Resident Installed Charging Duct/ Cord d) Charging cord guidelines	Action 1.1.3 – update Streets Code (Chapter 21) Action 1.2.2 – ROW charging guidelines
2) Does the Mayor and Council support flexibility in the Zoning Code’s parking space minimums to accommodate accessible aisles in EV charging retrofits of existing parking lots?	Action 1.1.5 – update Zoning Code (Chapter 25)
3) Which philosophy does the Mayor and Council prefer for setting a user rate for future city owned and operated charging stations? a) No Fee/Free Charging b) Cost Recovery c) Revenue Generation	Action 1.1.4 – update Traffic Code (Chapter 23) Action 2.1.5 – City-owned public charging

Feedback #1: Which of the following option(s) for right-of-way/curbside charging does the Mayor and Council support?



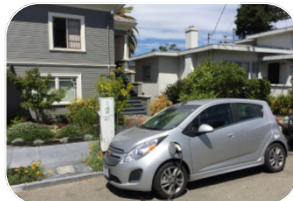
Model 1: Vendor Installed Charging

Rockville/Peppco partnership for on-street charging.

Washington DC public space permit for vendors. Residents work with neighbors and a vendor.

Provides public charging.

Converts space to EV charging; may pose a challenge in areas with limited parking



Model 2: Resident Installed Charging

Montgomery County/Takoma Park have guidelines for resident installed EV charging in the ROW.

Offers residents L2 charging options

Most costly option for a resident and requires permit

Does not prevent other cars from blocking private charger

Charging infrastructure could be damaged during ice/snow events.



Model 3: Resident Installed Charging Duct/ Cord

Several European cities allow residents to hire a contractor to insert a channel/duct into the sidewalk/ pavement to create a flush conduit to hold Level 1 or 2 charging cables.

Charging asset is flush with sidewalk, cord can be removed when not in use or during ice/snow events.

Does not prevent other cars from blocking private charger. Requires permit.



Model 4: Charging Cord Guidelines

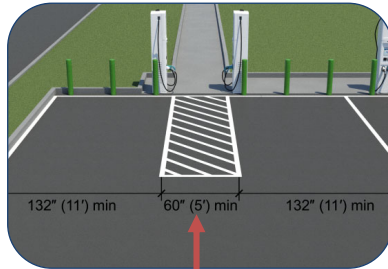
Washington DC/Vancouver have guidelines for Level 1 cords across sidewalks.

Least costly option for a resident; allows flexibility in EV parking space locations.

Potential safety and sidewalk safety/accessibility concerns.

Level 1 charging not usually suitable as only charging source.

Feedback #2: Does the Mayor and Council support flexibility in the Zoning Code's parking space minimums to accommodate accessible aisles in EV charging retrofits of existing parking lots?



Policy guidance is needed for future Zoning Ordinance updates to balance EV charging retrofits, accessibility, and parking lot minimums.



Challenge: The retrofit of an existing parking lot requires at least one 60-inch access aisle for accessible charging. This often requires the loss of one or more parking spaces to repurpose the space as an accessible aisle.

Parking Space Analysis at Mattie Stepanek Park

MAYOR AND COUNCIL OF ROCKVILLE
1800 PRECARIO DR. ROCKVILLE, MD 20850

Convert five (5) standard parking into four (4) EV charging spaces. The size (6') front aisle allows two EV spaces to meet ADA accessibility requirements to the EV Charging Station.

Current Use Analysis						
Area	Owner	Use	Count / Square Feet	Code Required	Code Required	Parking
				Parking -	Parking -	Required
				Field	Field	Fraction
and Dr.	City of Rockville	Parking	2	20		10.20 per field
"	"	Parking	4	2		2 per count
"	"	Event Counts	3	2		2 per count
"	"	Other	11	1		1 per value
"	"	Park/Programmed	101066	0.0001		1 per 10,000 sq. ft.

MT

Provided Parking						
Lot	Standard	Motorcycle	ADA/Standard	ADA-Van	EV*	Total
and Dr.	271	0	1	4	0	
and Dr.	272	0	1	4	4	

*EV space must be ADA accessible.

Challenge: The loss of parking spot(s) triggers a parking space analysis. The site may not meet parking lot minimums and prevent charger installation.

Feedback #3: Which philosophy does the Mayor and Council prefer for setting a user rate for future city owned and operated charging stations?

1) No Fee

Examples	Level 2 Rates
Hyattsville	Free to charge (\$0.50/hr parking lot fee)
Falls Church	Free first hour (then \$0.20/kWh + \$3/hr dwell)

2) Cost Recovery

- Cost of electricity (per kWh)
- Annual contract service costs (network, credit card, maintenance, etc.)

Examples	Level 2 Rates
Montgomery County Parking Garages	\$0.17/kWh (4-hour time limit)
Pepco	\$0.18/kWh
MD Department of Transportation	\$0.18/kWh

3) Revenue Generation

- Cost recovery
- Idle/Dwell Fee (\$/hr) to encourage relocation after charging is complete and maximize charger use
- Administration fee (%)

Examples	Level 2 Rates
Arlington	\$0.1746/kWh + dwell fee (after 15 minutes = \$3/hr, capped at \$25)
University of Maryland	\$0.20/kWh + idle fee (after 15 minutes = \$3/hr, capped at \$24)
Rockville Town Center West	\$0.26/kWh + idle fee (\$1/hr after 6 hours)

Questions

- Questions or feedback:
Amanda Campbell acampbell@rockvillemd.gov
- EV Readiness Plan Project page:
<https://engagerockville.com/evplan>
- THANK YOU to DPW, CPDS, R&P, the Environment Commission, partners, and all who contributed to EV planning in Rockville.

