

# **PUBLIC SERVICE COMMISSION OF MARYLAND**

## **Electric Vehicle Charging Pilot Progress Report**

Pursuant to the 2021 Session Joint Chairmen's Report

November 8, 2021



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## I. Introduction

On January 14, 2019, the Maryland Public Service Commission (“PSC”) approved the implementation of an electric vehicle (“EV”) charging pilot for the electric investor-owned utilities (“IOUs”)<sup>1</sup> with Order No. 88997 (hereinafter “EV Charging Pilot”).<sup>2</sup> The Joint Chairmen’s Report (“JCR”) published in April 2021 by the Chairmen of the Senate Budget and Taxation Committee and House Appropriations Committee (collectively “Committees”) requested information on the status of the IOUs’ EV pilot. Specifically, the JCR requested that the PSC report on the status of IOU-installed public charging stations including “the location of the installations and the cost by IOU for the utility and for ratepayers.” The JCR also requested information on the “steps that have been undertaken and completed to address barriers to locating these stations in Baltimore City and efforts of the IOUs to encourage installation of electric vehicle charging equipment by third parties including rebates or other incentives.” This document contains the PSC’s response to the Committees’ request.

The IOUs provide semi-annual reports to the PSC in compliance with Order No. 88997. The information in this report is from the IOUs’ semi-annual reports filed on September 15, 2021, and includes data through June 30, 2021.<sup>3</sup> The EV Charging Pilot is set to conclude by December 31, 2023. The IOUs will file their next semi-annual reports by February 1, 2022.

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<sup>1</sup> The IOUs are Baltimore Gas and Electric Company (“BGE”), Delmarva Power and Light Company (“DPL”), The Potomac Edison Company (“PE”), and Potomac Electric Power Company (“Pepco”).

<sup>2</sup> Southern Maryland Electric Cooperative, Inc. (“SMECO”) was approved for a public charging pilot on July 21, 2019, which is outside the scope of the JCR information request.

<sup>3</sup> Maillog No. 237050, The Potomac Edison, Semi-Annual Progress Report of The Potomac Edison Company Regarding Implementation of Approved Electric Vehicle Charging Program Offerings (Sept. 15, 2021) (“PE Report”); Maillog No. 237048, Baltimore Gas and Electric Company, Electric Vehicle Charging Program Semi-Annual Progress Report and Mid-Course Program Evaluation Report of Baltimore Gas and Electric Company (Sept. 15, 2021) (“BGE Report”); and

Maillog No. 237059, Potomac Electric Power Company and Delmarva Power & Light Company, Semi-Annual Progress Report for the Period of January 1, 2021 through June, 30, 2021 (Sept. 15, 2021) (“PHI Report”).

## II. Summary of Data

The utility-owned public EV charger program is one of several offerings within the EV Charging Pilot approved by Order No. 88997 for the IOUs.<sup>4</sup> The IOUs are permitted to install a specified number of publicly accessible “smart” Level 2 (“L2”) chargers or Direct Current Fast Chargers (“DCFCs”). The property on which these chargers are installed must be leased, occupied, or owned by a local, municipal, or state government entity (*e.g.*, libraries, parks, train stations.) BGE, DPL, and Pepco have been accepting applications for public charging stations since July 1, 2019.<sup>5,6</sup> PE has been accepting applications since December 17, 2019.<sup>7</sup>

The table below provides an overview of the maximum number of utility-owned public EV chargers approved by the Commission to be installed by the IOUs, the total EV chargers installed through the first half of 2021, and the applications under review or pending construction. As of June 30, 2021, the IOUs have installed a total of 207 public chargers, or approximately 23 percent of the maximum number of approved EV chargers. If the applications under review or under construction are completed by their projected completion dates, the utilities will have installed approximately 45 percent of the approved EV chargers by the end of 2021. The Appendix includes a detailed breakdown of the chargers installed by utility, location, and charger type.

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<sup>4</sup> Order No. 88997 also approved a number of residential and non-residential program offerings, which are outside the scope of the JCR information request.

<sup>5</sup> BGE Report at 11.

<sup>6</sup> PHI Report at 28.

<sup>7</sup> Maillog No. 231347 at 9.

**Table 1 IOU Utility-Owned Public EV Charger Program Summary<sup>8,9,10</sup>**

	Maximum Chargers	Installed Through Q2 2021	Under Review or Construction
BGE	500	131	39
DPL	100	14	52
PE	59	20	7
Pepco	250	42	105
<b>Total</b>	<b>909</b>	<b>207</b>	<b>203</b>

### III. Costs

In Order No. 88997, the PSC directed the IOUs to recover the costs of the EV Charging Pilot through future rate case proceedings. All incurred program costs are placed into a regulatory asset that can be incorporated into rate base at the conclusion of future rate cases.<sup>11</sup> The table below shows the costs of the IOUs' utility-owned public EV charging programs through June 30, 2021. Approximately \$9.9 million has been spent statewide. This represents approximately 34 percent of the total projected costs for the utility-owned public EV charger programs.

**Table 2 Costs of IOU Utility-Owned Public EV Charger Programs through June 30, 2021<sup>12,13,14</sup>**

	Public Charging Material	Public Charging Labor	Public Charging Network	Public Charging Pilot Total
BGE	\$4,301,468	\$2,343,894	\$394,800	\$7,040,162
DPL	\$162,705	\$475,531	\$0	\$638,236
PE	\$790,075	\$77,016	\$14,737	\$881,828
Pepco	\$429,163	\$938,443	\$0	\$1,367,606
<b>Total</b>	<b>\$5,683,411</b>	<b>\$3,834,884</b>	<b>\$409,537</b>	<b>\$9,927,832</b>

<sup>8</sup> PE Report at Appendix C.

<sup>9</sup> BGE Report at Appendix C.

<sup>10</sup> PHI Report at Appendix C.

<sup>11</sup> BGE and Pepco both applied for cost recovery of some of their pilot costs via their respective Multi-Year Rate Plans in Case Nos. 9645 and 9655. Both companies' costs were approved to be recovered via distribution rates with any future pilot costs to continue being placed into a regulatory asset for future review.

<sup>12</sup> PE Report at Appendix B.

<sup>13</sup> BGE Report at Appendix B.

<sup>14</sup> PHI Report at Appendix A (outlining separate program budgets for Pepco and DPL).

The utility-owned public chargers have charging rates based on the type of charger that a customer is utilizing. The charging rates for L2 chargers are less than those for DCFCs due to the difference in charging speeds between the two charger types. The IOUs maintain the charging rates on their websites and in the associated tariffs. The charging rates are currently uniform across each IOU’s service territory and are designed to be market-based. The table below illustrates the rates for the utility-owned public chargers through the end of 2021.

**Table 3 IOU Utility-Owned Public Charger Rates through December 31, 2021<sup>15,16</sup>**

Utility	L2 Rate (\$/kWh)	DCFC Standard Rate (\$/kWh)	DCFC Multi-Vehicle Rate (\$/kWh)
BGE	\$0.18	\$0.34	\$0.255
DPL	\$0.18	\$0.34	\$0.255
PE	\$0.16	\$0.30	N/A
Pepco	\$0.18	\$0.34	\$0.255

#### **IV. Benefits to the State and Ratepayers**

Public EV charging infrastructure provides benefits of EVs to owners, to ratepayers, and to the grid. The PSC received testimony from various parties in Case No. 9478 on these benefits, as well as in the petition for approval to implement the EV Charging Pilot.<sup>17</sup> Individuals who elect to own and drive EVs receive the direct benefits of lower operational costs and lower vehicle maintenance costs, whereas all utility customers receive the larger grid benefit of lower

<sup>15</sup> [https://www.firstenergycorp.com/help/saving\\_energy/electric-vehicles/maryland-ev/maryland-ev/pe-ev-rates.html](https://www.firstenergycorp.com/help/saving_energy/electric-vehicles/maryland-ev/maryland-ev/pe-ev-rates.html). In its September 2021 semi-annual filing, Potomac Edison proposed to raise its public charging rates for both L2 and DCFC chargers to the following ranges: \$0.21 - \$0.25 (for L2 chargers) and \$0.31 - \$0.34 (for DCFCs). The request is pending review by the Commission.

<sup>16</sup> <https://www.bge.com/SmartEnergy/InnovationTechnology/Pages/EV-FAQs.aspx>; <https://www.delmarva.com/SmartEnergy/InnovationTechnology/Pages/FAQs.aspx>; and <https://www.pepco.com/SmartEnergy/InnovationTechnology/Pages/FAQs.aspx>

<sup>17</sup> Maillog No. 218613, Leader of PC44 Electric Vehicle Work Group, Petition for Implementation of a Statewide Electric Vehicle Portfolio (Jan. 22, 2018).

rates through increased utility electricity sales.<sup>18</sup> More generally, with more EVs on the road the State will benefit from reduced air pollution and greenhouse gas emissions.<sup>19</sup>

The PSC required the IOUs to file mid-pilot and final pilot evaluations in Order No. 88997 to regularly monitor the costs and benefits of the Pilot. The findings of these mid-course evaluations for the utility-owned public EV charging programs are summarized below. The final pilot evaluation will be filed in 2024.

**Table 4 Key Evaluation Findings for Utility-Owned Public EV Charger Programs<sup>20</sup>**

	Key Evaluation Findings
BGE	<ul style="list-style-type: none"> <li>• Average hourly load profiled for the program shows that both weekday and weekend EV charging begin ramping up around 5 a.m., peak around 3 p.m., and ramp down until midnight.</li> <li>• Average weekend EV charging exhibited a higher peak than weekday charging from January 2021 onward, whereas weekday and weekend peaks remained more consistent in prior months.</li> </ul>
PHI	<ul style="list-style-type: none"> <li>• EV charging peaks around 3:30 p.m. on both weekdays and weekends, with charging peaking meaningfully higher on weekends.</li> </ul>
PE	<ul style="list-style-type: none"> <li>• Load profile data shows greater weekday vs. weekend usage as well as peak consumption occurring in the early to midday timeframe, both of which are common characteristics of public EV charging profiles.</li> </ul>

**Table 5 Data Summary for Utility-Owned Public EV Charger Program<sup>21</sup>**

	Total Active Ports	Total Sessions	Total kWh	Total Port Usage (hours)	Hourly Utilization (%)
BGE	236	4,170	48,959	14,454	1.1%
PHI	45	1,810	21,244	5,335	2.6%
PE	20	1,323	20,669	2,638	2.8%

<sup>18</sup> Increases in utility electricity sales via EV charging will increase the total sales over which the utility can recover the fixed costs of the distribution grid. This results in decreases to the fixed distribution rates that all ratepayers pay on their bills.

<sup>19</sup> Petition at 16-31.

<sup>20</sup> Maillog No. 237041, Guidehouse, Inc., Maryland Statewide Electric Vehicle Portfolio Evaluation, Mid-Course Evaluation Report (Sept. 15, 2021), at page 5.

<sup>21</sup> *Id.* at page 6.

## V. Baltimore City Status Update

BGE received approval from Baltimore City in December 2020 for a Franchise Agreement. This agreement allows BGE to install chargers on the Baltimore City right-of-way and on parks and recreation facilities. BGE must apply for each charger through the City's internal process before constructing a charger.

There are currently three locations in Baltimore City with utility-owned (BGE) public EV chargers that are operational, including seven L2 chargers and two DCFCs.<sup>22</sup> More details regarding the location of each EV charger are available in the Appendix. BGE leveraged ribbon cuttings and other events to promote its public charging network and general EV education and awareness. In addition to these completed chargers, there are also 11 locations in Baltimore City with 24 L2 chargers and nine DCFCs in the planning and construction phase.<sup>23</sup>

## VI. Incentives for Private Third Party Charging Companies

Private third party charging companies are vital to the growth of the EV market as the chargers they operate reduce the distance or range anxiety that EV owners experience between charges and encourage others to adopt EVs. There is currently one offering available to third party charging companies under the EV Charging Pilot involving a demand charge credit. The demand charge credit reduces the demand charge on a non-residential customers' bill by 50 percent, thus reducing the fixed charges that EV charging companies have to pay towards their distribution costs. This credit is available for 30 months or through the end of the pilot depending on when a non-residential charger signs up.

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<sup>22</sup> BGE Report at Appendix C.

<sup>23</sup> *Id.*

## **VII. Conclusion**

The PSC appreciates the opportunity to provide an update on the EV Charging Pilot. The IOUs will continue to report their progress on a semi-annual basis, and the PSC will continue to monitor this pilot program to ensure implementation continues as planned and to evaluate the benefits to ratepayers and the State.

Appendix

Appendix

Utility	Station Name	Address	City	County	L2 Chargers Installed	DCFC Installed	Date Commissioned
Pepco	Takoma Park - Morrison Park	7301 Carroll Ave	Takoma Park	Montgomery	2	0	9/1/2019
	New Carrollton - Andrew Hanco Building	8511 Legation Rd	New Carrollton	Prince George's	2	0	2/1/2020
	Rockville - Thomas Farm Community Center	700 Falls Grove Dr	Rockville	Montgomery	1	1	4/1/2020
	Mt. Rainer - Muni Park & Ride Lot	Perry St	Mount Rainer	Prince George's	3	0	8/1/2020
	Greenbelt - Springhill Lake Rec Center	6101 Cherrywood Ln	Greenbelt	Prince George's	1	0	4/20/2021
	Greenbelt - Schrom Hills Rec Center	6915 Hanover Pkwy	Greenbelt	Prince George's	4	0	4/10/2021
	PG Co Equestrian Center	14900 Pennsylvania Ave	Upper Marlboro	Prince George's	4	0	3/1/2021
	Capital Heights Municipal Parking Lot	6053 Old Central Ave	Upper Marlboro	Prince George's	3	0	5/27/2021
	Forest Heights Police and Community Center	5508 Arapahoe Dr	Forest Heights	Prince George's	2	0	5/25/2021
	Oxon Hill Park and Ride	6600 Oxon Hill Rd	Oxon Hill	Prince George's	2	0	5/25/2021
DPL	Salisbury Parking Lot #15	W Market St & Camden St	Salisbury	Wicomico	2	0	9/1/2020
	Betterton Community Center Parking Lot	100 Main St	Betterton	Kent	2	0	10/1/2020
	Dorchester County Office Building	501 Court Ln	Cambridge	Dorchester	1	0	5/7/2021
	Galena Town Hall	101 S Main St	Galena	Kent	1	0	5/19/2021
	John Walter Smith Park, Snow Hill	6061 Public Landing Rd	Snow Hill	Worcester	1	0	5/27/2021
	Somerset County Crisfield Library	100 Collins St	Crisfield	Somerset	1	0	5/7/2021
	Somerset County Technical High School	Tawes Campus Dr	Westover	Somerset	2	0	5/27/2021
	Somerset Government Office Complex	11916 Somerset Ave	Princess Anne	Somerset	1	0	5/7/2021
	Westover Athletic Complex Facility	30290 Sam Barnes Rd	Westover	Somerset	2	0	5/7/2021
Worcester County Recreation Center	6030 Public Landing Rd	Snow Hill	Worcester	1	0	5/27/2021	

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Utility	Station Name	Address	City	County	L2 Chargers Installed	DCFC Installed	Date Commissioned
BGE	Truxtun Park	273 Hilltop Ln	Annapolis	Anne Arundel	1	0	9/13/2019
	Carroll County Office Building/ Detention Center/ Sheriff's Office	225 Center St	Westminster	Carroll	1	0	12/10/2019
					0	1	
	Aberdeen City Center	11 Centennial Lane	Aberdeen	Harford	3	0	1/16/2020
	Howard County Library System: Miller Branch	9421 Frederick Rd	Ellicott City	Howard	2	1	2/3/2020
	Carroll Community College	1601 Washington Rd	Westminster	Carroll	2	0	2/26/2020
	Eldersburg Library	6400 W Hemlock Dr	Sykesville	Carroll	3	0	3/2/2020
	Annapolis Library	1410 West St	Annapolis	Anne Arundel	2	1	3/13/2020
	Ripken Stadium	873 Long Dr	Aberdeen	Harford	7	2	3/30/2020
	North Carroll Branch Library	2255 Hanover Pike	Hampstead	Carroll	3	0	3/31/2020
	Howard County Library System: Savage Branch	9525 Durness Lane	Laurel	Howard	2	0	4/24/2020
	Havre-de-Grace Park & Ride	816 Otsego St	Havre-de-Grace	Harford	3	0	4/28/2020
	Havre-de-Grace City Hall/ Police Station	711 Pennington Ave	Havre-de-Grace	Harford	2	1	4/28/2020
	Harford County Government Administrative Office	20 S Main St	Belair	Harford	0	2	5/5/2020
	Veronica Roni Chenowith Activity Center	1707 Fallston Rd	Fallston	Harford	4	0	5/5/2020
	Ascend One Building	8903 Standford Blvd	Columbia	Howard	3	2	6/25/2020
	Howard County Library System: Glenwood Branch	2350 Roxbury Mills Rd	Cooksville	Howard	3	2	6/26/2020
	Carroll County Library: Finksburg Branch	2265 Old Westminster Pike	Finksburg	Carroll	2	1	6/29/2020
	Washington Suburban Sanitary Commission HQ	14501 Sweitzer Lane	Laurel	Howard	2	0	6/30/2020
	HCLS Glenwood Branch	10375 Little Patuxent Park Way	Columbia	Howard	3	0	7/14/2020
North Arundel Aquatic Center	7888 Crain Highway	Glen Burnie	Anne Arundel	2	2	9/28/2020	
Hampstead Municipal Park	4001 Houck Ave	Hampstead	Carroll	2	0	10/22/2020	

Appendix

Utility	Station Name	Address	City	County	L2 Chargers Installed	DCFC Installed	Date Commissioned
BGE	Public Service Building - Glen Burnie Garage	7480 Baltimore-Annapolis Blvd	Glen Burnie	Anne Arundel	3	1	11/10/2020
	Randallstown Community Center	3525 Resource Dr	Randallstown	Baltimore	1	2	12/29/2020
	Broadneck High School	1265 Green Holly Dr	Annapolis	Anne Arundel	2	1	12/30/2020
	Essex Park & Ride	23 Eastern Blvd	Baltimore	Baltimore County	2	0	1/8/2021
	Howard Community College Parking Lot C	10901 Little Patuxent Parkway	Columbia	Howard	3	2	1/8/2021
	Arbutus Library and Senior Center	855 Sulphur Spring Rd	Arbutus	Baltimore County	2	2	1/11/2021
	Ellicott City Courthouse	3701 Court-House Dr	Ellicott City	Howard	3	2	1/13/2021
	Whitmore Garage - Downtown Annapolis	37 Clay Street	Annapolis	Anne Arundel	3	1	1/15/2021
	Eastport-Annapolis Library	269 Hillsmere Dr	Annapolis	Anne Arundel	2	2	1/19/2021
	Carney Park and Ride	2905 Jomat Ave	Baltimore	Baltimore County	2	0	1/26/2021
	Meadowood Regional Park	10650 Falls Rd	Lutherville-Timonium	Baltimore County	2	0	1/26/2021
	Chesapeake Beach - Kellam's Field	8200 Bayside Rd	Chesapeake Beach	Calvert	2	2	2/9/2021
	Sollers Multi-purpose Center	325 Sollers Point Rd	Dundalk	Baltimore County	2	2	2/9/2021
	Essex-Rosedale DC/MSC	8914 Kelso Dr.	Essex	Baltimore County	0	2	3/22/2021
	BWI - Cellphone Parking Lot	1001 Scott Dr	Hanover	Anne Arundel	0	4	4/1/2021
	Odenton Regional Library	1325 Annapolis Rd	Odenton	Anne Arundel	2	0	4/15/2021
	Sykesville City Hall	7547 Main St	Sykesville	Carroll	1	1	5/17/2021
	Gott's Court Garage - Downtown Annapolis	25 Northwest St	Annapolis	Anne Arundel	2	2	7/26/2021
	Edward F. Borgerding DC/MSC	5800 Wabash Ave	Baltimore	Baltimore	2	0	6/24/2021
	City of Bowie - Kenhill Center	2614 Kenhill Dr	Bowie	Prince George's	1	2	6/28/2021
Maryland Zoo	Safari Pl	Baltimore	Baltimore	3	0	6/10/2021	

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Utility	Station Name	Address	City	County	L2 Chargers Installed	DCFC Installed	Date Commissioned
BGE	John R. Hargrove DC/MSC	700 East Patapsco Ave	Baltimore	Baltimore	2	2	7/26/2021
	Crofton Community Library	1681 Riedel Rd	Crofton	Anne Arundel	3	0	8/6/2021
	DGS - 100 Community Place	100 Community Place	Crownsville	Anne Arundel	1	1	8/6/2021
	BWI - Rideshare Staging Lot	671 Elkridge Landing Rd	Hanover	Anne Arundel	0	6	8/18/2021
	City Of Bowie - City Hall	15901 Excalibur Rd	Bowie	Prince George's	1	2	8/23/2021
PE	Frostburg- Parish Hall	16 Uhl St.	Frostburg	Allegany	1	0	3/23/2020
	Middletown - Elm St.	119 Washington St.	Middletown	Frederick	1	0	4/3/2020
	Frederick - MARC Train	155 B and O Ave.	Frederick	Frederick	1	0	4/3/2020
	Garrett College	687 Mosser Rd	McHenry	Garrett	1	0	9/11/2020
	Allegany College	12401 Willowbrook Rd	Cumberland	Allegany	1	0	9/17/2020
	Boonsboro Town Hall	15 N Main St	Boonsboro	Washington	1	0	11/13/2020
	Keedysville Library	22 Taylor Dr	Keedysville	Washington	1	0	11/13/2020
	Oakland Town Parking Lot	108 E Oak St	Oakland	Garrett	1	0	12/8/2020
	Hancock Park Lot Canal St	77 W Main St	Hancock	Washington	1	0	12/15/2020
	Deep Creek Visitors Center	2 Vacation Way	McHenry	Garrett	1	0	12/22/2020
	New Market Town Hall	40 South Alley	New Market	Frederick	1	0	12/22/2020
	Liberty St Surface Lot	40 N. Liberty St	Cumberland	Allegany	1	0	12/31/2020
	Deep Creek Visitors Center	2 Vacation Way	McHenry	Garrett	0	2	12/31/2020
	Joseph Hancock Primitive Park	159 W Main St	Hancock	Washington	0	2	1/4/2021
	Hagerstown Community College	11400 Robinwood Dr	Hagerstown	Washington	1	0	1/21/2021
	New Windsor Library	1100 Green Valley Rd	New Windsor	Carroll	1	0	3/15/2021
	Taneytown Library	10 Grand Dr	Taneytown	Carroll	1	0	3/15/2021
	Grantsville	171 Main St	Grantsville	Garrett	1	0	6/16/2021