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May 26, 2023

Ms. Brinda Westbrook-Sedgwick  
Commission Secretary  
Public Service Commission of DC  
1325 G Street N.W., Suite 800  
Washington, DC 20005

**Re: ET2023/FC1050 and RM402023**

Dear Ms. Westbrook-Sedgwick:

Enclosed please find Potomac Electric Power Company's Motion for Leave to Reply and Reply Comments in the above referenced matters.

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

*/s/ Dennis P. Jamouneau*

Dennis P. Jamouneau

Enclosure

cc: All Parties of Record

**BEFORE THE  
PUBLIC SERVICE COMMISSION  
OF THE DISTRICT OF COLUMBIA**

**IN THE MATTER OF**

<b>THE PETITION OF</b>	)	
<b>POTOMAC ELECTRIC POWER</b>	)	<b>ET2023-01</b>
<b>COMPANY TO APPROVE A TARIFF</b>	)	
<b>CHANGE FOR 20 kW AND BELOW</b>	)	
<b>RESIDENTIAL NEM SOLAR</b>	)	
<b>INTERCONNECTIONS,</b>	)	
	)	
	)	
<b>THE INVESTIGATION OF THE</b>	)	
<b>IMPLEMENTATION OF INTERCONNECTION)</b>	)	<b>FORMAL CASE NO. 1050</b>
<b>STANDARDS IN THE DISTRICT</b>	)	
<b>OF COLUMBIA,</b>	)	
	)	
<b>AND</b>	)	
	)	
<b>TITLE 15 DCMR CHAPTER 40 – DISTRICT</b>	)	
<b>OF COLUMBIA SMALL GENERATOR</b>	)	<b>RM40-2023-01</b>
<b>INTERCONNECTION RULES</b>	)	

**MOTION FOR LEAVE TO REPLY AND REPLY COMMENTS OF  
POTOMAC ELECTRIC POWER COMPANY**

**I. INTRODUCTION**

Pursuant to 15 D.C.M.R. Section 105.8, Potomac Electric Power Company (Pepco or the Company) hereby files its Motion for Leave to Reply and Reply Comments in the above-captioned proceedings. The motion and the accompanying reply comments stem from Pepco’s April 4, 2023 proposal to modify Rider-NEM (Petition).<sup>1</sup> Pepco’s Petition, if approved, would require customers interconnecting new small solar generators to pay a flat System Upgrade Fee. Those

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<sup>1</sup> Formal Case No. 1050, *In the Matter of the Investigation of the Implementation of Interconnection Standards in the District of Columbia*, RM40-2023-01, *In the Matter of 15 DCMR Chapter 40 –District of Columbia Small Generator Interconnection Rules*, and ET2023-02, *In the Matter of the Petition of Potomac Electric Power Company to Approve a Tariff Change for 20kW and Below Residential NEM Solar Interconnections*, filed April 4, 2023 (Petition).

customers would otherwise not be required to pay any additional fees or system upgrade costs when interconnecting to Pepco's system.

On April 11, 2023, the Public Service Commission of the District of Columbia (Commission) issued a Public Notice (Notice), which solicited comments on Pepco's Petition, with comments due by May 1, 2023. On or before May 1, 2023, several organizations or persons filed comments, including the Office of People's Counsel for the District of Columbia (OPC), the District Department of Energy and Environment (DOEE), GRID Alternatives Mid-Atlantic (Grid Alternatives), the Chesapeake Solar and Storage Association (CHESSA), the Solar Energy Industries Association (SEIA), and David Roodman. Along with a motion for leave, the following reply comments comprehensively address the issues raised by the various commenters and address OPC's additional petition to investigate Pepco's interconnection process.<sup>2</sup>

Accordingly, Pepco respectfully requests that the Commission (1) grant the Company's motion for leave to reply; (2) consider Pepco's reply comments in its deliberation on this matter; (3) approve Pepco's Petition; and (4) deny OPC's petition to open an investigation into Pepco's interconnection process.

## **II. MOTION FOR LEAVE TO REPLY**

Pursuant to Commission Rule 105.8, the Company respectfully moves for leave to file reply comments in this proceeding. The Notice, which did provide for comments on Pepco's Petition, did not specifically allow the right to file reply comments. Pepco represents that good cause exists to permit reply comments, which will provide additional detail and a more robust record for the Commission's decision-making on the Company's Petition. Pepco requests that the

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<sup>2</sup> On May 11, 2023, Pepco filed a motion for enlargement of time to respond to the OPC petition to institute an investigation and also noted that it would file a motion for leave to reply and reply comments in this proceeding by May 26, 2023. The Commission approved the motion in Order No. 21619.

Commission grant Pepco’s motion and incorporate Pepco’s reply comments into its deliberation in this proceeding.

### **III. REPLY COMMENTS**

The commenters discuss numerous aspects of Pepco’s Petition and overarching policy considerations related to interconnection in the District of Columbia (District). To respond to each of the points addressed in the comments, Pepco has organized these reply comments by topic.

#### **A. Pepco’s Petition can help customers promptly, streamline the interconnection process, and facilitate the fulfillment of District solar and clean energy policies.**

As OPC correctly recognizes, the District is a leader in developing laws and policies to address climate change and issues related to energy affordability and inequity, and the Commission plays a vital role in executing on these laws and policies.<sup>3</sup> Pepco’s proposal, while modest in comparison to the overarching District clean energy policies, is targeted to alleviate known issues in the interconnection process for small solar customers and presents opportunities to remove barriers for these customers in an expedient fashion.

At least one commenter recommends that the Commission delay consideration of Pepco’s Petition. Specifically, OPC states that Pepco’s proposal, including the request to establish a recovery mechanism while the Company is also filing a rate case, is “both temporally odd, and substantively problematic.”<sup>4</sup> In support of this statement, OPC explains that Pepco’s proposal should be addressed in its rate case and that Pepco “does not provide any persuasive reasoning as to why the Commission should address its Rider-NEM proposal independent” of the rate case.<sup>5</sup>

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<sup>3</sup> OPC Comments at 6, 9.

<sup>4</sup> *Id.* at 4.

<sup>5</sup> *Id.*

Pepco disagrees.

As of the filing of these reply comments, Pepco's rate case has no definitive timeline or decision date, and even the Company's proposed procedural schedule in Formal Case No. 1176 sets the date for a Commission order in February 2024. The relief requested in Pepco's Petition, however, can and should benefit customers far sooner and without the need to wait for a rate case order. Moreover, while the Petition provides tangible relief to small solar customers, the scale and dollar impact of the Petition is comparatively small.<sup>6</sup> Finally, the Company's reporting and implementation proposals—including enhancements to the transparency of costs incurred, which are noted in these reply comments—allow stakeholders and the Commission to review and assess the program as it is implemented and matures. Accordingly, Pepco's proposal can and should be addressed separately from a rate case to allow customers to benefit sooner.

In addition to OPC's concerns about timing and recommended incorporation into Pepco's rate case, DOEE and CHESSA<sup>7</sup> both comment about the effects of Pepco's Petition on overall interconnection timelines and other "incremental benefits" to the interconnection process.<sup>8</sup> DOEE, for example, states that the Commission should require Pepco to demonstrate how the proposal would benefit customers and improve delays to the interconnection process, while CHESSA posits that the flat fee proposed by Pepco should reduce interconnection times.<sup>9</sup>

Pepco agrees that the Petition, if approved, will benefit the interconnection process.<sup>10</sup> For

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<sup>6</sup> Based on the study period included in Pepco's Petition, approximately \$196,000 of the \$980,000 in system upgrade costs would be socialized to customers.

<sup>7</sup> Pepco notes that CHESSA also seeks clarification regarding fees related to resubmitted interconnection applications. Pepco agrees that each premise/customer would only have to pay one System Upgrade Fee per project.

<sup>8</sup> DOEE Comments at 5; CHESSA Comments at 5.

<sup>9</sup> *Id.* Pepco would also reiterate that the "fee" discussed in Pepco's petition is not an application fee but rather a fee that contributes towards Distribution System Upgrades and that the costs are for design, engineering, and construction of the given upgrade.

<sup>10</sup> *See, e.g.*, Petition at 1.

example, as Pepco pointed out in its Petition, the proposed System Upgrade Fees would streamline certain aspects of the interconnection process when distribution upgrades are required, including the issuance of cost letters, related communications with customers and developers, and awaiting payment before commencing construction. While the precise benefit in terms of reduced interconnection processing times has not been quantified, Pepco can agree to study the effects of this Petition—if approved—and include such information in the semi-annual reports that it has proposed to provide to the Commission.

**B. Pepco’s Petition can incorporate many of the commenters’ suggestions regarding data provision and transparency.**

In the Petition, Pepco based its cost allocation proposal on a full year of data for Level 1 interconnection requests and proposed reporting semi-annually so that stakeholders and the Commission would have visibility into the System Upgrade Fees being assessed and paid as well as the Distribution System Upgrade costs Pepco incurred when such upgrade costs are required. Several of the commenters, including OPC, DOEE, CHESSA, and SEIA, provide comments and suggestions regarding transparency for both the need of the given upgrades and their costs.

For example, SEIA recommends that Pepco report the total amount of upgrades over each six-month period, what circumstances require “types of common interconnection facilities,” and unit costs that Pepco charges.<sup>11</sup> CHESSA’s comments are similar, but also recommend a public review period after the first year.<sup>12</sup> DOEE’s comments also express a desire for greater transparency, recommending that the Commission review the “root cause” of upgrade cost increases prior to approving the fee proposed by Pepco. In addition to these points, OPC states that the study period—which for the Petition was April 1, 2021, through March 31, 2022—should be

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<sup>11</sup> SEIA Comments at 2.

<sup>12</sup> CHESSA Comments at 6-7.

“at least five years” to provide a better average upon which to calculate the fee.<sup>13</sup>

Pepco appreciates these comments and shares the stakeholders’ clear position that transparency is important. For that reason, Pepco’s Petition includes a proposed semi-annual reporting cadence, and the reporting can include more granular information sought by the commenters. For example, Pepco can agree to provide (1) the total amount of Distribution System Upgrade fees incurred; (2) total number of applications received and approved; (3) total amount of System Upgrade fees assessed and paid; and (4) a representative average of unit costs by category (labor and parts/materials).<sup>14</sup> This information can be provided in each semi-annual report.

Pepco can also agree, upon Commission approval, to develop materials explaining in more detail the types of circumstances that require Distribution Upgrade Fees and Interconnection Facilities Costs and post this information on its website for the public and developers. Finally, Pepco can support CHESSA’s proposal to convene a public review period after one full year of program implementation at which point Pepco will produce a detailed report with the data collected and answer questions from the Commission and stakeholders. This report can include, to the extent applicable and calculable, an explanation of the avoided costs to customers associated with upgrades required by interconnections, which was recommended by CHESSA.<sup>15</sup>

On three separate points, however, Pepco disagrees with the commenters. Specifically, Pepco disagrees with OPC that a longer duration evaluation period is necessary to determine the

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<sup>13</sup> OPC Comments at 4.

<sup>14</sup> As has been discussed in the FC 1050 interconnection working group, for competitive reasons and so that suppliers continue to offer the best prices, Pepco cannot agree to provide unit costs at the level requested by the commenters. Pepco’s proposal, therefore, would be to provide the type of upgrade costs and an average cost of materials.

<sup>15</sup> CHESSA Comments at 6.

proper “average” costs. In fact, Pepco recommended semi-annual reporting and updating its tariff at least once every three years to track and show the costs the Company incurs and fees customers pay to allow costs and fees to remain in a reasonable range. The Company continues to view those procedural safeguards as necessary and sufficient.

Similarly, DOEE’s suggestion to investigate the “root cause” of upgrade costs before approving the Petition should be rejected. As a reminder, and as provided in the Petition, during the one-year study period, 85 of the 2,825 applications required Distribution System Upgrades.<sup>16</sup> While those Distribution System Upgrades understandably were impactful to those customers, they represent 3.0% of interconnections during this one-year study period.<sup>17</sup> Clearly, this percentage does not suggest the type of pervasive problem necessitating a “root cause” analysis, particularly given the fact that the Commission has several pending customer complaints addressing these very issues. Thus, DOEE’s recommendation would provide little benefit while unnecessarily delaying implementation of the proposal included in the Petition.

Finally, OPC’s push to restrict the use of power flow studies as part of the technical review process undermines the District’s ability to meet its climate goals. Pepco’s use of power flow analyses to determine the need for upgrades is actually more accommodating to interconnecting Distributed Energy Resources (DERs), including solar, than “screens” included in current Commission regulations. For example, 15 D.C.M.R. Section 4004.2(c) states that “[w]hen a proposed Small Generator Facility is to be interconnected on a single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed Small Generator Facility, may not exceed twenty (20) kW.”<sup>18</sup> However, it is not uncommon for

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<sup>16</sup> Of these 85 applications that required Distribution System Upgrades, 44 were withdrawn.

<sup>17</sup> The calculation is as follows:  $85 / 2,825 \times 100\% = 3.0\%$ .

<sup>18</sup> 15 D.C.M.R. Section 15-4004.2(c).



secondary lines to exceed 20kW in aggregate generation capacity. Thus, this screen would in many cases limit interconnection, frustrate District goals, and adversely impact customers seeking to go solar. In contrast, the power flow study, which provides a more holistic assessment of the generation's *impact* on the secondary, can permit the interconnection of DERs even if the aggregated generation on the Secondary Line exceeds 20kW as long as projected voltages and capacity remain within acceptable limits. This is because the power flow study looks at adverse system impacts, while the "screens" in the current regulations are broadly written and likely outdated.

Moreover, other jurisdictions have recognized that Pepco's power flow study is an appropriate tool to evaluate adverse system impacts when interconnecting a small generator facility with Pepco's system. In Maryland, for example, the Maryland Public Service Commission (MD PSC) recently granted Pepco's request to waive certain sections in the Code of Maryland Regulations (COMAR) to permit Pepco to use the power flow study to evaluate Level 1 and Level 2 interconnection requests. One particular section in COMAR is similar to DCMR §15-4004.2(c) in that it also limits the aggregate capacity on the shared secondary line to 20kW. As Pepco noted in its request for the waiver to the MD PSC, "because the system design and resulting impacts vary by location, [Pepco is] often able to connect more than 20kW on shared transformers and secondaries. The 20kW limit specified in the regulations could unnecessarily restrict interconnections in locations on the system that would otherwise support those interconnections."<sup>19</sup> The MD PSC granted Pepco's request in a Letter Order on February 9, 2023.<sup>20</sup>

### **C. The Commission can consider other policy issues without delaying the approval**

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<sup>19</sup> See Pepco's Temporary Waiver Request of COMAR Sections 20.50.09.09(A)(1)(a) and 20.50.09.10(A)(1)(a), Maillog No. 300722.

<sup>20</sup> MD PSC Letter Order, February 9, 2023. See Attachment 1.

**of the Petition.**

Several commenters also address policy issues that, while important, should not delay the Commission's approval of Pepco's Petition. For example, CHESSA comments that the Commission should socialize more of the costs, thereby reducing the amount paid by customers through the System Upgrade Fee. CHESSA also recommends that the Commission limit any changes to the fee to no more than once per every three years.<sup>21</sup>

The percentage of fees socialized and the periodicity of updates to the fee are policy choices, and Pepco discusses each in its Petition. With regard to how often to update the fee, while the Company appreciates the need for cost certainty for interconnecting customers, the reason why Pepco proposed this structure for updating costs is to avoid instances where System Upgrade Fees or Distribution System Upgrade costs incurred cause the fee or the socialized amount to be too high or low. This approach, which would require Pepco to calculate the System Upgrade Fee at least once every three years, balances the desire for cost certainty and the need to maintain a reasonable cost allocation. However, the Commission could accept CHESSA's proposal to maintain the \$280 fee for the entire three-year period while Pepco continued to report the relevant numbers in its semi-annual filings.

In regard to the percentage socialized, Pepco first looked to the Commission's cost-sharing rulemakings in the context of Community Renewable Energy Facilities (CREFs) and NEM, but also incorporated the fact that the Inflation Reduction Act allows tax credits for interconnection customer costs of 3% or more, based on specific project eligibility.<sup>22</sup> Based on these factors, Pepco proposed the approximately 80/20 allocation of costs between all customers and those seeking to

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<sup>21</sup> CHESSA Comments at 6-7.

<sup>22</sup> See: [Navigating the Inflation Reduction Act of 2022: A Practical Guide | Troutman Pepper](#).

interconnect small solar generators. Nonetheless, this is a policy matter properly subject to Commission discretion and can be determined by the Commission as it deliberates on the Petition.

DOEE also notes that cost-sharing related to CREFs is not included in the Petition and, separately, recommends the Commission reconvene the Advanced Inverter Working Group, which DOEE believes can provide a more comprehensive approach to dealing with interconnection and grid hosting capacity issues.<sup>23</sup> Pepco has supported the current cost-sharing mechanism for CREFs that is embedded in Commission regulations as a way to minimize CREF upgrade costs and recognize the value that these assets have to the District as a whole. In addition, Pepco supports the Commission reconvening the Advanced Inverter Working Group and looks forward to those discussions with stakeholders and Commission Staff. However, even if that working group process results in recommendations and/or Commission directives that differ from current Pepco processes, such a decision would not be rendered for a considerable time. If approved, Pepco's Petition brings timely benefits to customers and should not be delayed on the chance that the Advanced Inverter Working Group may result in a directive that would modify the System Upgrade Fee. If that should occur, such modification can be implemented, but, in the meantime, customers receive the benefit of implementing the System Upgrade Fee as proposed.

Finally, Grid Alternatives' comments recommend against any additional fees levied on interconnecting customers--specifically customers benefitting from the Solar For All program—and note concern with the current “cost causation” model, whereby the interconnecting customer that causes the need for the system upgrade bears the cost.<sup>24</sup> Pepco appreciates Grid Alternatives' comments and the Company's proposals in the Petition represent a balanced approach that seeks

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<sup>23</sup> DOEE Comments at 3.

<sup>24</sup> Grid Alternatives Comments at 1.

to move away from a strict cost-causer model and minimize direct costs for small solar interconnections while also recognizing that the general customer population should not bear all upgrade costs. Pepco's approach is, thus, similar to the type of approach advanced by the Commission in its cost-sharing rulemakings, which Pepco continues to support as reasonable and appropriate.

#### **IV. RESPONSE TO OPC'S REQUEST TO INVESTIGATE**

##### **A. Summary of OPC's Request to Investigate**

Along with its brief comments on Pepco's petition, OPC also filed a request to commence an investigation (hereinafter referred to as the Request) into what OPC states are "Pepco's compliance with the Commission's regulations governing the interconnection of small generators, [and] implement reforms that may be necessary to improve upon existing regulations."<sup>25</sup> In its Request, OPC cites five areas<sup>26</sup> that it claims warrant additional Commission investigation, including:

- Delays in interconnection application processing and responsiveness to customer and developer inquiries;
- Accuracy of Pepco's power flow studies, which are used to determine if Distribution System Upgrades are required, and a request that the Commission develop or consider standards for governing power flow studies;
- Pepco's compliance with the obligation to provide a "technical explanation" when denying a Level 1 interconnection and considering a project under Level 2 criteria as well as

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<sup>25</sup> OPC Comments at 28.

<sup>26</sup> OPC's Request contains six points, but two discuss power flow studies and are considered together for the purpose of Pepco's reply comments.

- Pepco's compliance with Commission application processing timelines;
- Improvements to Pepco's hosting capacity maps; and,
- Treatment and allocation of Distribution System Upgrades.<sup>27</sup>

The following section explains why the Commission should deny OPC's Request to open a formal investigation.

**B. OPC's Request to Investigate numerous aspects of Pepco's interconnection process duplicates issues being considered in several current proceedings.**

Each of OPC's stated areas of concern are currently before the Commission and, in many cases, OPC itself has already commented on or is actively litigating these matters. Accordingly, and as specified below, granting OPC's Request would result in a wasteful and unnecessary duplication of resources, which would undermine active litigation, and thus should be wholly denied.

1. Pepco has instituted new processes and filed a corrective action plan to address interconnection application delays, and Pepco currently reports data related to responsiveness to customer/developer inquiries.

The first topic addressed in OPC's Request discusses interconnection application delays and communication issues experienced by customers and developers. According to the Request, the delays occur at multiple stages in the interconnection process and include communications provided in Pepco's ConnectTheGrid (CTG) portal.<sup>28</sup>

Pepco strives to provide a positive, efficient, and transparent customer experience in all aspects of its customer service, including with customers and developers seeking to interconnect DERs to the distribution system. In doing so, Pepco acknowledges that more can be done and has made numerous improvements to its processes over the last year and would note that the bulk of the

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<sup>27</sup> See, e.g., OPC Comments at 7-8.

<sup>28</sup> OPC Comments at 14-15.

examples provided in the OPC Request predate Pepco's more recent enhancements. Specifically, Pepco has been working to improve interconnection application timelines for customers using people, process, and technology solutions. Many solutions have been piloted or implemented during the first half of 2023 and have demonstrated positive results.

### *People changes*

Pepco has implemented two primary people changes to improve interconnections: 1) piloting a new relationship manager role, and 2) enhancing accountabilities across engineering teams.

- 1) **Piloting Relationship Manager (RM) Role.** Earlier this year, Pepco began a pilot for a new Relationship Manager (RM) role in Pepco. The RM serves as a developer's point of contact for all interconnection projects in the developer's portfolio. The RM role is targeted to give Pepco a deeper understanding of developer needs and improve communications. The pilot was initially rolled out with select developers to allow for changes based on learnings. The pilot will end on June 1, 2023, after running for approximately three months. Initial feedback from developers has shown a clear benefit and promising results across total process time, internal understanding of developer's needs, and consistency in communications. Pepco is currently examining rolling out the program more fully and expanding to other jurisdictions within the PHI family of utilities.
- 2) **Enhancing accountabilities.** Last year, Pepco refined roles and responsibilities across key engineering teams. This allows Pepco to further streamline the interaction model between teams; as a result, Pepco is expecting to see an improvement in the end-to-end interconnection process timeline, with more

significant impacts for larger, more complex projects.

### *Process changes*

Pepco has implemented two primary process changes to improve interconnections: 1) further streamlining the internal end-to-end process, and 2) creating an expedited review path.

- 1) **Streamlining internal process.** Last year, Pepco streamlined the internal end-to-end process for large DER interconnection projects. The new process reduces handoffs between teams, reduces the total number of process steps, clarifies criteria for engaging each engineering team, simplifies the technical review and engineering study processes (see #2 below), and improves standardization. The new process, together with the other solutions, will increase transparency and reduce application timelines. The process was piloted December 2022 through February 2023.
- 2) **Creating an expedited path.** Last year, Pepco redesigned the technical review process by further clarifying criteria determining which projects need to receive a streamlined technical review for projects that do not require an in-depth review. As a result, projects that do not meet that criteria are able to streamline engagement with internal stakeholders for faster, more efficient approval. This new process was piloted in November 2022 through January 2023 and saw a positive impact on application processing times. The pilot was expanded to other PHI Companies, Atlantic City Electric and Delmarva Power and Light, in Spring 2023 and saw similar results. Now that the pilot has been conducted in all PHI jurisdictions,

collective lessons learned are being compiled and any adjustments will be made before rolling out this process in the normal course of business later this year.

### *Technology changes*

Pepco has implemented two primary technology changes to improve interconnections: 1) implementing enhancements to internal systems, and 2) creating a product roadmap with future enhancements.

1) **Implementing enhancements.** In December 2022, Pepco implemented six changes to the CTG portal with the goal of improving internal workflow management and external communications. Changes included:

- Added Community Solar specific application form fields
- Enabled editing in "System Information" application section
- Provided clarity on required documentation based on project type
- Provided pre-populated templates for Applications & Agreements
- Enabled files previously uploaded under Part II to be deleted
- Included customers on notifications about application status

The changes benefit customers by reducing application complexity, confusion, incomplete applications, time spent on applications, and improving transparency for customers. Pepco performed several demos with developers in December 2022 and January 2023 and has received favorable feedback.

2) **Creating a product roadmap.** In addition to changes implemented at the end of 2022, Pepco has identified future technical enhancements that may streamline the internal process and improve the customer experience. These recommended enhancements have been added to a broader interconnection technology roadmap as a mechanism to



reinforce continuous improvement of the customer experience based on feedback. Pepco is working to finalize the roadmap and align on timing and sequencing.

These enhancements and process improvements will result in timelier and more substantive customer and developer engagement, all targeted at improving the process and experience.<sup>29</sup>

Finally, as part of its 2022 Annual Interconnection Report, Pepco developed and filed a corrective action plan to improve its timeliness with respect to interconnection processing, among other related issues.<sup>30</sup> This corrective action plan, which is aligned with the enhancements discussed above, summarized the concrete steps being taken by the Company to improve the customer experience and application timeliness, and the Company will review this plan quarterly to track progress towards compliance with Commission regulations. The 2022 Annual Interconnection Report also provides data showing Pepco's timeliness in responding to customer and developer inquiries.<sup>31</sup>

Taken together, the planned and ongoing enhancements identified by the Company, as well as the actions identified in the cited corrective action plan, support Pepco's dedicated efforts to provide a more positive, efficient, and transparent interconnection experience for customers and developers in the District. Because Pepco's processing timeliness, as show in its annual report and corrective action plan, are currently before the Commission, the Commission should deny this

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<sup>29</sup> Moreover, as explained in the Direct Testimony of Company Witness Bell-Izzard in Formal Case No. 1176, Pepco's current multiyear rate case filing, the Company has identified several opportunities to reduce application timelines, even timelines resulting from higher volume of interconnection applications that are more complex than in the past. *See* the Direct Testimony of Company Witness Bell-Izzard, PEPCO (J) at 22-23, Formal Case No. 1176 (Apr. 13, 2023).

<sup>30</sup> *See* Potomac Electric Power Company's Annual Interconnection Report for 2022, Formal Case No. 1050 at 7 (Mar. 29, 2023).

<sup>31</sup> *Id.* at 5.

aspect of OPC's Request.

2. Pepco's use of power flow studies to determine the need for system upgrades complies with Commission regulations and is a central focus of several customer complaint cases.

In multiple sections of the Request, but most prominently in the second and third issues specified, OPC notes its concerns with Pepco's power-flow studies and analysis, which Pepco uses to determine the need for Distribution System Upgrades.<sup>32</sup> As with the bulk of OPC's cited issues, Pepco's use of power flow studies is pending before the Commission. Accordingly, OPC's request for an investigation on this issue should be denied.

The use of power flow studies to determine the need for Distribution System Upgrades is directly before the Commission in several consumer complaints and, in these pending complaints, OPC is representing the customer disputing the need for Distribution System Upgrades. While the complaints themselves are confidential given Commission regulations regarding customer data and information, the outcome of these cases is directly relevant to and overlaps with OPC's request and should be decided before any further action is taken.

As noted in Pepco's reply comments, above, Commission regulations already allow for an electric distribution company to utilize a power flow-based study as an alternative to the strict interconnection review screening criteria.<sup>33</sup> To reiterate, Pepco's power flow analysis has been reviewed by the MD PSC and found to be beneficial to increasing DER adoption. Specifically, the MDPSC approved a waiver of the regulations to allow for the use of Pepco's power flow studies in evaluating interconnection applications. In the course of the MD PSC temporarily waiving the COMAR regulations, the staff of MDPSC recognized that Pepco's use of the power

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<sup>32</sup> OPC Comments at 16-17.

<sup>33</sup> See e.g., 15 DCMR 4003.3(e), 4004.2(g), 4005.2(l), and 4011(i).

flow study when evaluating interconnections is more accommodating than any rigid screening process.<sup>34</sup> Given the number of interconnections in the District currently and the proliferation expected in the future to meet the District’s solar generation goals, screens other than the power flow study would act as a real barrier to small generators seeking to interconnect with Pepco’s system, but these same projects may not fail Pepco’s power flow analysis. In fact, MDPSC staff stated through their working group that 150 feeders would not pass Level 1 or 2 screening, however these feeders may accommodate DER after Pepco’s power flow analysis.<sup>35</sup>

Finally, the issue of power flow studies and Distribution System Upgrades is pending in another matter at the Commission. On November 17, 2022, the Commission issued a Notice of Legislative-Style Hearing (Hearing Notice) in Formal Case No. 1050, which scheduled a hearing for December 13, 2022, and directed Pepco to, inter alia, “publicly explain its protocols for determining the need for distribution system upgrades.”<sup>36</sup> In doing so, the Hearing Notice directly cites the concerns expressed by stakeholders in Formal Case No. 1050 proceedings as well as in the context of written comments dealing with RM40. Those comments would include those submitted by OPC. On November 30, 2022, the Commission postponed that public hearing, but the matter is currently pending.

For all of these reasons, OPC’s request interferes with active cases or hearings and should be denied.

### 3. Pepco has instituted new measures to provide customers proper notification when

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<sup>34</sup> MDPSC staff found that “model[ing] IEEE 1547-2018 smart inverter capabilities using Power Flow should also improve the hosting capacity calculations, thereby facilitating increased DER interconnection in support of state policy goals.”

<sup>35</sup> PHI COMAR Waiver Staff Comments Pages 7-8, there are “over 150 feeders in Maryland with generation whose aggregate nameplate capacity currently exceeds 15% of the feeder’s peak load, which at the onset, limits the number of existing feeders” able to accommodate DER under Level 1 or 2 screening. See Attachment 2.

<sup>36</sup> Hearing Notice at 1.

applications require movement from Level 1 to Level 2.

OPC states that it needs more oversight and enforcement of regulations that require Pepco to communicate or otherwise provide an explanation to the customer in the event an interconnection project requires Distribution System Upgrades.<sup>37</sup> To support this statement, OPC notes that Pepco currently provides the customer or developer with online notices that the Company is processing the given project under Level 2 procedures, but that the notices “fail to clearly explain the basis for that decision” and do not further explain what other means were available to process the application under Level 1 procedures.<sup>38</sup>

15 D.C.M.R. Section 4004.2(g) requires, in relevant part, states:

If the Interconnection Request requires the construction of Interconnection Facilities or Distribution System Upgrades to accommodate the Small Generator Facility, the EDC shall continue its evaluation using Level 2 procedures, commencing at Subsection 4005.4 (d)(1), and the EDC shall notify the Interconnection Customer that it is continuing its evaluation using Level 2 procedures. The EDC may use results from a valid power flow-based study performed to evaluate the impact of the proposed Small Generator Facility, provided such results are not used to fail Subsections 4004.2 (c), (d), or (e) screens. EDC shall make available upon request a copy of its power flow-based study for each applicant to the Commission.

15 D.C.M.R. Section 4005.4(d)(a) states:

If the EDC requires the construction of Distribution System Upgrades during the Interconnection Request process, the EDC shall provide a technical explanation that reviews the need for the identified facilities and/or upgrades. The EDC shall demonstrate that required functionalities are not satisfied by employing IEEE STD 1547 certified and UL 1741 SA listed equipment.

OPC is correct that Pepco currently uses its CTG portal to provide communications to customers (or developers) if the Company, based on a power flow study, determines that Distribution System Upgrades are required for an interconnection application. Similar to the

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<sup>37</sup> OPC Comments at 20-21 (*citing* 15 D.C.M.R. Sections 4004.2(g) and 4005.4(d)(1)).

<sup>38</sup> *Id.*

previous section, which discusses Pepco's use of power flow studies, issues related to these customers communications are part of at least one of the customer complaint cases currently pending at the Commission. In addition, however, Pepco does currently provide the requisite notifications, per the above-cited regulations, in its CTG portal when an application is required to be reviewed under Level 2 procedures and provides a technical explanation reviewing the need for the upgrades. Pepco acknowledges that, in prior years, these communications were, in certain cases, deficient, but the Company has enhanced its processes to further comply with these regulations. The messaging through CTG includes the scope of work for the upgrades, as well as a high level cost estimate. If there is an option to downsize or mitigate in any other manner, and avoid the upgrade (remaining at Level 1) that option is also explained.

4. Issues regarding Pepco's Hosting Capacity Maps are discussed in the rulemaking OPC cites and is before the Commission.

OPC explains that Pepco does currently provide hosting capacity maps on its website, but in OPC's view the maps are "impractical" and recommends Pepco's maps show more granular system size information.<sup>39</sup>

This specific portion of the request for investigation is currently before the Commission, which can be seen in the citations provided in OPC's comments,<sup>40</sup> and OPC itself provided these same comments on March 28, 2022 in the cited rulemaking proceeding. As such, OPC's concerns are pending and the Commission will give them due consideration. Moreover and more importantly, nowhere does OPC allege that Pepco is out of compliance with any regulation, order, or merger

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<sup>39</sup> OPC Comments at 22-23.

<sup>40</sup> OPC Comments at 23 *citing RM40-2022-01-E, In the Matter of DCRM Chapter 40 – District of Columbia Small Generator Interconnection Rules* (Jan. 28, 2022).

commitment. Thus, it appears that OPC's statements with respect to hosting capacity maps amount to enhancing Pepco's current maps, which is a practical and policy point, but which does and should not give rise to an investigation.

5. The allocation of Distribution System Upgrades and Interconnection Facilities costs has been or is being comprehensively addressed by Commission rulemakings and Pepco's Petition.

OPC suggests that the Commission should investigate further how interconnection costs are allocated, citing both recent rulemakings and several "complaints OPC has received over the past year."<sup>41</sup> OPC further states that a formal investigation is warranted to ensure that Pepco appropriately identifies and calculates Distribution System Upgrades.<sup>42</sup>

OPC's citations, which pertain to current and previous rulemakings as well as pending formal customer complaints, do not support its view that an investigation is needed. Rather, they establish that the Commission is systematically and comprehensively addressing the matters. Over the past several years, the Commission has promulgated and finalized cost-sharing provisions for CREFs<sup>43</sup> and proposed rules for cost-sharing for NEM applicants.<sup>44</sup> Pepco's Petition itself is yet another forum for the Commission to address the allocation of upgrade costs for a segment of NEM customers. As evidenced by the comments filed in this proceeding, stakeholders and OPC had the opportunity to comment on Pepco's allocation method.<sup>45</sup> These matters have been or are currently

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<sup>41</sup> OPC Comments at 23-25.

<sup>42</sup> *Id.*

<sup>43</sup> *See* RM40-2020-01-E and Formal Case No. 1050, Order No. 20991 (Aug. 11, 2021).

<sup>44</sup> *See* RM40-2022-01-E, Notice of Proposed Rulemaking (Jan. 28, 2022).

<sup>45</sup> OPC devoted approximately 2.5 pages to Pepco's Petition in its Comments.

before the Commission and no additional proceedings are necessary.

**V. CONCLUSION**

**WHEREFORE**, for the reasons set forth herein, Pepco respectfully requests that the Commission: (1) grant Pepco’s motion for leave to reply; (2) accept and consider Pepco’s reply comments; (3) approve Pepco’s April 4 Petition; and (4) deny OPC’s petition for a formal investigation.

Respectfully submitted,  
Potomac Electric Power Company

/s/ Dennis P. Jamouneau  
Dennis Jamouneau  
Assistant General Counsel

Dennis Jamouneau, DC Bar No. 983357  
701 Ninth Street, N.W.  
Washington, D.C. 20068  
(202) 428-1122

Washington, DC  
May 26, 2023

# ATTACHMENT 1



JASON M. STANEK  
CHAIRMAN

MICHAEL T. RICHARD  
ANTHONY J. O'DONNELL  
ODOGWU OBI LINTON  
PATRICE M. BUBAR



**PUBLIC SERVICE COMMISSION**

**#2, 2/8/23 AM; ML# 300722, E-59259**

February 9, 2023

Matthew K. Segers, Esq.  
Assistant General Counsel  
Pepco Holdings  
EP9628  
701 Ninth Street NW  
Washington, DC 20068  
[mkssegers@pepcoholdings.com](mailto:mkssegers@pepcoholdings.com)

Dear Mr. Segers:

The Commission has reviewed the Request filed on January 4, 2023 by Potomac Electric Power Company and Delmarva Power & Light Company for a temporary waiver of COMAR 20.50.09.09A(4) and 20.50.09.10A(9).

After considering this matter at the February 8, 2023 Administrative Meeting, the Commission approved the Companies' request for a temporary waiver of COMAR 20.50.09.09A(4) and 20.50.09.10A(9) for good cause, subject to the condition that the Companies fully communicate to any interconnection customer the reasoning for each screen criteria used to deny a future application when using Power Flow and respond to Commissioner Linton's request within 90 days.

By Direction of the Commission,

*/s/ Andrew S. Johnston*

Andrew S. Johnston  
Executive Secretary

ASJ/st

# ATTACHMENT 2

STATE OF MARYLAND  
PUBLIC SERVICE COMMISSION

NUMBER: E59259

DATE: February 1, 2023

MAIL LOG NO.: 300722

TO: Jason M. Stanek, Chairman  
Michael T. Richard, Commissioner  
Anthony J. O'Donnell, Commissioner  
Odogwu Obi Linton, Commissioner  
Patrice M. Bubar, Commissioner

FROM: Anthony Myers, Executive Director **MP for AM**

Re: Request for a Temporary Waiver of COMAR 20.50.09.09A(4) and  
20.50.09.10A(9).

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**Description of Application:**

On January 4, 2023, pursuant to COMAR 20.50.01.05, Potomac Electric Power Company ("Pepco") and Delmarva Power & Light Company ("Delmarva") (collectively "the Companies") filed a request for a temporary waiver of COMAR 20.50.09.09A(4) and 20.50.09.10A(9) in order for the Companies to utilize power-flow based analysis to evaluate adverse system impacts associated with certain interconnection requests prior to submitting a plan to the Commission for approval.

**Groups which should receive a copy of Staff Recommendation:**

Pepco; Delmarva; Maryland Office of People's Counsel

**Recommended Action (Including Conditions):**

Staff recommends that the Commission approve Pepco and Delmarva's request for a temporary waiver of COMAR 20.50.09.09A(4) and 20.50.09.10A(9) for good cause, subject to the condition that the Companies fully communicate to any interconnection customer the reasoning for each screen [criteria] used to deny a future application when using Power Flow.

John Borkoski, P.E.  
John Borkoski, P.E.  
Chief Engineer

Lloyd J. Spivak  
Lloyd J. Spivak **MAD**  
Staff Counsel

**Commission Action on \_\_\_\_\_:**

**Approved \_\_\_ Disapproved \_\_\_ Accept for Filing \_\_\_**

cc: H. Robert Erwin, Jr., General Counsel  
Andrew S. Johnston, Executive Secretary  
Ryan C. McLean, Chief Public Utility Law Judge  
Stephanie A. Bolton, Director, Consumer Affairs Division  
Tori Leonard, Director of Communications

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**Summary of Filing**

On January 4, 2023, pursuant to COMAR 20.50.01.05,<sup>1</sup> Pepco and Delmarva filed a request for a temporary waiver of COMAR 20.50.09.09A(4) and 20.50.09.10A(9) to allow the Companies to utilize power-flow based analysis to evaluate adverse system impacts associated with certain interconnection requests prior to submitting a plan to the Commission for approval. The Companies are requesting a temporary waiver of COMAR 20.50.09.09(A)(4) and 20.50.09.10(A)(9) so that the Companies may use a power-flow based analyses to evaluate adverse system impacts associated with Level 1 and 2 interconnection requests. The filing states that this temporary waiver is necessary while the PC44 Interconnection Working Group (“Workgroup”) develops modified regulations promoting the permissive use of such analyses.<sup>2</sup> Thus, the requested temporary waiver would remain in effect until the adoption of the PC44 modified regulations by the Commission.

As an alternative, the Companies are requesting a temporary waiver to utilize power flow-based analysis at the onset of their technical review of small generator facilities. Power flow is a steady-state analysis method used to determine the voltages, currents, and real and reactive power flows in a system under given load conditions at each bus on the system. It also analyses the direct impacts a small generator facility can have on utility equipment such as: voltage rise, voltage flicker/deviation, thermal limits, reverse power, and capacity impacts at a specific location. It provides a more granular view of where upgrades or enhanced capabilities are needed, which allow small generator facilities that exceed the thresholds of Level 1 and 2 screening criteria to be safely interconnected to the electric grid system.

**Applicable Law**

COMAR 20.50.09.09A:

A. The utility shall evaluate a Level 1 small generator facility for the potential for adverse system impacts using the following:

(1) For interconnection of a proposed small generator facility:

(a) To a radial distribution circuit, the aggregate generation on the circuit, including the proposed small generator facility, may not exceed 15 percent

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<sup>1</sup> COMAR 20.50.01.05 states: “The Commission may waive a regulation in this subtitle for good cause shown.”

<sup>2</sup> The Workgroup is currently reviewing regulations that would allow power-flow analysis for Level 1 and 2 interconnection applications.

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of the line section annual peak load as most recently measured at the substation or calculated for the line section; or

(b) To a spot network:

(i) On the load side of spot network protectors, the proposed small generator facility shall utilize an inverter-based equipment package;

(ii) The interconnection equipment proposed for the small generator facility is lab-certified; and

(iii) The aggregate generation of all interconnected small generator facilities may not exceed 5 percent of the spot network's maximum load if the spot network serves more than one customer;

(2) When a proposed small generator facility is to be interconnected on a single-phase shared secondary line, the aggregate generation on the shared secondary line, including the proposed small generator facility, may not exceed 20 kW;

(3) When a proposed small generator facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20 percent of the nameplate rating of the service transformer;

(4) As an alternative method to evaluate the adverse system impacts of a proposed Level 1 small generator facility on the distribution system, as described in §A(1)(3) of this regulation, a utility may use a power-flow based analysis system if the utility has submitted:

(a) A plan, subject to Commission approval, that describes its methodology for its power-flow based modeling system and includes reasoning for each screen used to evaluate an application; and

(b) Information about the systems results, as required in Regulation .14 of this chapter;

COMAR 20.50.09E:

E. Level 1 Review Failure.

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(1) If the small generator facility is not approved under a Level 1 review, the utility shall provide the applicant a letter explaining its reasons for denying the interconnection request.

(2) If a small generator facility fails a Level 1 review, the utility may approve the interconnection request if the small generator facility can be interconnected safely and reliably to the utility's electric distribution system.

(3) When a small generator facility is not approved under a Level 1 review, the applicant may submit a new interconnection request for consideration under Level 2, Level 3, or Level 4 procedures.

COMAR 20.50.09.10A:

A. The utility shall evaluate a Level 2 small generator facility for the potential for adverse system impacts using the following:

(1) For interconnection of a proposed small generator facility:

(a) To a radial distribution circuit, the aggregate generation on the circuit, including the proposed small generator facility, may not exceed 15 percent of the line section annual peak load most recently measured at the substation or calculated for the line section; or

(b) To a spot network:

(i) When the interconnection of a proposed small generator facility is to the load side of spot network protectors, the proposed small generator facility shall utilize an inverter-based equipment package;

(ii) The applicant's interconnection equipment proposed for the small generator facility shall be lab-certified or field-approved; and

(iii) A small generator facility, when aggregated with other generation, the aggregate generation on the spot network, may not exceed 5 percent of a spot network's maximum load if the spot network serves more than one customer;

(2) For fault current limitations:

(a) The nameplate capacity of the proposed small generator facility, in aggregation with other generation and energy storage devices on the

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distribution circuit, may not contribute more than 10 percent to the electric distribution circuit's maximum fault current at the point on the primary line nearest the point of interconnection;

(b) The nameplate capacity of the proposed small generator facility, in aggregation with other generation and energy storage devices on the distribution circuit, may not cause any distribution protective devices and equipment including substation breakers, fuse cutouts, and line reclosers, or other customer equipment on the electric distribution system to be exposed to fault currents exceeding 90 percent of the short circuit interrupting capability; and

(c) The interconnection request may not request interconnection on a circuit that already exceeds 90 percent of the short circuit interrupting capability.

(3) The proposed small generator facility's point of interconnection may not be on a transmission line;

(4) When a small generator facility is to be connected to 3-phase, 3-wire primary utility distribution lines, a 3-phase or single-phase generator shall be connected phase-to-phase;

(5) When a small generator facility is to be connected to 3-phase, 4-wire primary utility distribution lines, a 3-phase or single-phase generator will be connected line-to-neutral and will be effectively grounded;

(6) When the proposed small generator facility is to be interconnected on single-phase shared secondary line, the aggregate generation on the shared secondary line, including the proposed small generator facility, may not exceed 20 kW;

(7) When a proposed small generator facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20 percent of the nameplate rating of the service transformer;

(8) A small generator facility, in aggregate with other generation and energy storage devices interconnected to the distribution side of a substation transformer feeding the circuit where the small generator facility proposes to interconnect, the aggregate generation may not exceed 10 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity;

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(9) As an alternative method to evaluate the adverse system impacts of a proposed Level 2 small generator facility on the distribution system, as described in §A(1)–(8) of this regulation, a utility may use a power-flow based analysis system if the utility has submitted:

(a) A plan, subject to Commission approval, that describes its methodology for its power-flow based modeling system and includes reasoning for each screen used to evaluate an application; and

(b) Information about the system’s results, as required in Regulation .14 of this chapter.

COMAR 20.50.09.10F:

**F. Failure to Meet Level 2 Criteria.**

(1) Additional review may be appropriate when a small generator facility has failed to meet one or more of the Level 2 criteria of §A of this regulation.

(2) A utility shall:

(a) Within 30 calendar days, offer to perform additional review to determine whether minor modifications to the electric distribution system would enable the interconnection to be made consistent with safety, reliability, and power quality criteria; and

(b) Provide the applicant with a nonbinding, good faith estimate of the costs of additional review and minor modifications.

(3) The utility shall undertake the additional review only if the applicant agrees within 10 business days to pay for the cost of the review, which may be extended at the request of the applicant. A request for extension may not be unreasonably denied by the utility.

(4) If the review identifies the need for modifications to the distribution system, the utility shall make the necessary modifications only if the interconnection customer agrees to pay for the cost of the modifications.

COMAR 20.50.09.10H:

**H. Level 2 Review Failure.**



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(1) If the small generator facility is not approved under a Level 2 review, the utility shall provide the applicant written notification explaining its reasons for denying the interconnection request.

(2) The applicant may submit a new interconnection request for consideration under a Level 3 or Level 4 interconnection review; however, the queue position assigned to the Level 2 interconnection request shall be retained provided the request is made within 15 business days of notification that the current Level 2 interconnection request is denied.

**Staff Comments**

COMAR 20.50.09 governs the requirements for small generator facilities to interconnect and operate in parallel with the Maryland electric distribution system. This Chapter also outlines those standards for the level of utility review, analysis, and the technical screening criterion for Level 1<sup>3</sup> and Level 2 interconnection requests,<sup>4</sup> which the Companies say are too restrictive and could possibly serve as a barrier to interconnection requests.

The first two standards in this Chapter that the Companies say are too restrictive are COMAR 20.50.09.09A(1)(a) and 20.50.09.10A(1)(a), which specify the technical screening criteria utilities are to use for Level 1 and Level 2 interconnections, respectively. According to COMAR 20.50.09.09A(1)(a) and 20.50.09.10A(1)(a), the aggregate generation on the circuit, including the proposed small generator facility, may not exceed 15% of the line section annual peak load. These regulations are restrictive because the Companies have over 150 feeders in Maryland with generation whose aggregate nameplate capacity currently exceeds 15% of the feeder's peak load, which at the onset, limits the number of existing feeders in Maryland that are available to accommodate the influx of

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<sup>3</sup> Pursuant to COMAR 20.50.09.08B, a utility shall use a Level 1 procedure to evaluate an interconnection request to connect an inverter-based small generator facility when the small generator facility, or multiple small generator facilities interconnecting at a point of common coupling, has a nameplate capacity of 20kW or less.

<sup>4</sup> Pursuant to COMAR 20.50.09.08C, a utility shall use a Level 2 procedure to evaluate an interconnection request when: (a) The small generation facility, or multiple small generator facilities interconnecting at a point of common coupling, has a nameplate capacity of 2 MW or less; (b) The interconnection equipment is lab-certified or field-approved; and (c) The proposed interconnection is to a radial distribution circuit, or a spot network limited to serving one customer; or alternatively, the small generator facility was reviewed under Level 1 review procedures but not approved, and the applicant has submitted a new interconnection request for consideration.

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distributed energy resources (“DER”) requesting to interconnect to the electric grid system.<sup>5</sup>

The second of the standards in this Chapter that the Companies say are too restrictive are COMAR 20.50.09.09A(2) and 20.50.09.10A(6), of which the Companies state: “Many secondary configurations are designed to carry larger amounts of load, as the minimum transformer capacity used today is 25 kilovolt-ampere. Moreover, the immediate impacts of distributed generation to the service voltage and capacity limits—which are a function of load, generation, circuit lengths and impedance—resulting from location-specific parameters. Because the system design and resulting impacts vary by location, the Companies are often able [to] connect more than 20 kW on shared transformers and secondaries. The 20 kW limit specified in the regulations could unnecessarily restrict interconnections in locations on the system that would otherwise support those interconnections.”

In either case, if the interconnection of a small generator facility fails any one of the technical screenings, pursuant to COMAR 20.50.09.09E(3) and 20.50.09.10H(2),<sup>6,7</sup> the small generator facility will have to submit a new interconnection request for consideration under the next level of utility review. If it fails a Level 1 review, the small generator facility

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<sup>5</sup> COMAR 20.50.09.02B(10) defines a distributed energy resource as any geographically dispersed energy resource located on an electric distribution system that produces electricity or offsets electrical demand including small generator facilities, energy storage devices, energy efficiency devices, and demand response devices.

<sup>6</sup> COMAR 20.50.09.09E(3), Level 1 Review Failure, states: When a small generator facility is not approved under a Level 1 review, the applicant may submit a new interconnection request for consideration under Level 2, Level 3, or Level 4 procedures.

<sup>7</sup> COMAR 20.50.09.10H(2), Level 2 Review Failure, states: The applicant may submit a new interconnection request for consideration under a Level 3 or Level 4 interconnection review; however, the queue position assigned to the Level 2 interconnection request shall be retained provided the request is made within 15 business days of notification that the current Level 2 interconnection request is denied.

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will have to submit a new interconnection request under Level 2, 3, or 4 procedures.<sup>89</sup> If the interconnection fails a Level 2 review, the small generator facility will have to submit a new interconnection request under Level 3 or 4 procedures.<sup>10</sup>

Pursuant to COMAR 20.50.09A(4) and 20.50.09.10A(9), utilities are permitted to use an alternative method to evaluate the adverse system impacts of proposed Level 1 or Level 2 small generator facilities seeking to interconnect to Maryland's electric distribution system if the utility has a plan that has been previously approved by the Commission that includes a description of its methodology for its power-flow ("Power Flow")<sup>11</sup> based modeling

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<sup>8</sup> Pursuant to COMAR 20.50.09.08D, A utility shall use a Level 3 procedure to evaluate an interconnection request to area networks and radial distribution circuits when electric power is not exported to the electric distribution system based on the following criteria: (1) For interconnection requests to the load side of an area network: (a) The nameplate capacity of the small generator facility, or multiple small generator facilities interconnecting at a point of common coupling, is less than or equal to 50 kW; (b) The proposed small generator facility utilizes a lab-certified inverter-based equipment package; (c) The small generator facility utilizes reverse power relays, other protection functions, or both, that prevent the export of power into the area network; (d) The aggregate generation on the area network does not exceed the smaller of 5 percent of an area network's maximum load or 50 kW; and (e) Construction of facilities by the electric distribution company is not required to accommodate the small generator facility; or (2) For interconnection requests to a radial distribution circuit: (a) The small generator facility has a nameplate capacity of 10 MW or less; (b) The aggregate generation on the circuit, including the proposed small generator facility, is 10 MW or less; (c) The small generator facility will use reverse power relays or other protection functions that prevent power flow onto the electric distribution system; (d) The small generator facility is not served by a shared transformer; and (e) Construction of facilities by the utility on its own electric distribution system is not required to accommodate the small generator facility.

<sup>9</sup> Pursuant to COMAR 20.50.09.08E, a utility shall use the Level 4 procedures for evaluating interconnection requests if: (1) The interconnection request cannot be approved under a Level 1, Level 2, or Level 3 review, and the applicant has submitted an interconnection request for consideration under a Level 4 study review; and (2) The interconnection request does not meet the criteria for qualifying for a review under Level 1, Level 2, or Level 3 review procedures.

<sup>10</sup> Unlike Level 1 requests that are denied, the queue position assigned to Level 2 interconnection requests shall be retained provided the new interconnection request is made within 15 business days of notification that the current Level 2 interconnection request is denied.

<sup>11</sup> Power Flow modeling is a computer analysis of the flow of electric power at each bus in an interconnected system. Power Flow modeling usually focuses on a numerical analysis of AC power parameters such as voltages, voltage phase angles, real power, and reactive power.

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system, the reasoning for each screen [“or criteria”] used to evaluate an application, and information about the system’s results.

When COMAR 20.50.09 small generator facility interconnection regulations were codified in 2008, industry interconnection best practices were evolving, “dumb inverters” were the norm, and utilities had limited ability to model smaller interconnection requests, especially for secondary voltage systems (i.e., 600 volts and below). Therefore, following the industry best practice at the time, Maryland in its interconnection regulations adopted “rules of thumb” (or “Technical Screens”) in COMAR 20.50.09.09A and COMAR 20.50.09.10A to evaluate small generator interconnect requests as opposed to requiring the use of an analysis such as Power Flow.

Staff leads the PC44 Interconnection Workgroup and most Workgroup stakeholders recognize that Power Flow is an improvement over the Technical Screens currently codified in COMAR, especially given the advanced smart inverter capabilities that will become a requirement once the regulations proposed in RM77 become effective.<sup>12</sup> The ability to model IEEE 1547-2018 smart inverter capabilities using Power Flow should also improve the hosting capacity calculations, thereby facilitating increased DER interconnection in support of state policy goals. This is particularly important since COMAR Technical Screens do not address specific impacts at higher saturations of DER interconnections. As DER penetration levels increase, interconnection requests will increasingly fail current Level 1 and Level 2 Technical Screens. In recognition of these benefits, the Workgroup is currently considering regulation changes in its Phase V effort to make Power Flow the standard analysis method in Maryland, with some exceptions for utilities that currently do not have the ability to model certain electric distribution system aspects.<sup>13</sup>

Staff also notes that Power Flow can already be used in certain situations without violating COMAR. While the potential denial of an interconnection request due to broad Technical Screens is concerning, there are provisions in COMAR for handling initial denials to continue to facilitate the interconnection request. For a Level 1 interconnection request denial, COMAR 20.50.09.09E(2) still allows the utility to approve the interconnection request if it determines the small generator facility can be interconnected safely and reliably to the utility’s electric distribution system. The methodology an electric company uses for determining if the small generator facility can be interconnected safely and reliably to the utility’s electric distribution system is not defined further in COMAR, but COMAR does not preclude the use of Power Flow in this situation. Similarly, for a Level 2

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<sup>12</sup> RM77 - Revisions to COMAR 20.50.02.02 and 20.50.09.01, .06, and .14. Interconnection Regulations.

<sup>13</sup> In general, utilities have the technical ability to use Power Flow to model primary voltage systems (i.e., 4 kV and above). However, only a few larger utilities have the ability to model secondary voltage systems (i.e., 600 volts and below).

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interconnection request denial, COMAR 20.50.09.10F requires the utility to offer to perform additional review to determine whether minor modifications to the electric distribution system would enable the interconnection to be made consistent with safety, reliability, and power quality criteria. However, the utility is required to undertake the additional review only if the applicant agrees to pay for the cost of the review. Similarly, the methodology an electric company uses for determining if the small generator facility can be interconnected safely and reliably to the utility's electric distribution system is not defined further in COMAR, but COMAR does not preclude the use of Power Flow in this situation.

Since Power Flow is a more detailed analysis than using Technical Screens, there is an increased risk of delayed interconnection request approvals when using Power Flow. Although Power Flow has many benefits, Workgroup stakeholders have raised concerns that utilities which elect to utilize Power Flow must still abide by COMAR interconnection request processing deadlines. In addition, Workgroup stakeholders have expressed interest in understanding the criteria being used by utilities for Power Flow approvals. Typically, utility Power Flow criteria will include thermal limits, voltage high and low limits, voltage fluctuation limits and buffers to ensure that there are no reverse power operations for voltage regulators, reclosers and load tap changing transformers ("LTCs"). While some stakeholders would like to see a standardized set of Power Flow criteria codified in COMAR, Staff observes that electric companies have designed their electric systems with unique operating characteristics. Therefore, Staff concludes that a standardized set of Power Flow criteria may be hard to achieve in COMAR. From Staff's perspective, as long as interconnection request approvals meet COMAR processing deadlines, the primary benefit of the existing COMAR 20.50.09A(4) and 20.50.09.10A(9) requirements for electric company Power Flow plans is to provide increased transparency on the criteria an electric company uses for evaluating an interconnection request and not necessarily to restrict an electric company's use of Power Flow criteria. To that end, any waiver approval should also include a requirement that the electric company should communicate to any interconnection customer the reasoning for each screen ["criteria"] used to deny an application when using Power Flow to satisfy an objective of the waived COMAR regulation.

**Conclusion**

Staff concludes that Power Flow offers many advantages to provide a more accurate analysis of interconnection requests than the current set of Technical Screens in COMAR for Level 1 and 2 applications. To that end, the Workgroup is currently considering regulation changes in its Phase V effort to make Power Flow the standard for the review of interconnection requests in Maryland, with some exceptions. Therefore, Staff concludes there is good cause for approving the Companies' temporary waiver request until such time as new regulations allowing the use of Power Flow can be promulgated. However, the approval of this waiver request should be conditioned on requiring the Companies to fully

STATE OF MARYLAND  
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**Comments of the Engineering Division (E59259)**  
**Request for a Temporary Waiver of COMAR 20.50.09.09A(4) and .10A(9)**  
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communicate to any interconnection customer the reasoning for each screen [“criteria”] used to deny an application when using Power Flow.

Footnote No. 1 on page 2 of the Companies’ request indicates that “The Companies have been using power-flow based analyses for all interconnection requests since at least 2018. However, the Companies have no record of seeking Commission approval for the use of such analyses for Level 1 and 2 interconnection requests. Therefore, to the extent necessary, the Companies further request any waivers necessary for the prior use of the power-flow based analyses.”

Staff has reviewed this request and concludes that approval of any retroactive waiver for the Companies’ prior use of Power Flow analysis for Level 1 and 2 interconnections is not appropriate since the Companies have not shown that extraordinary circumstances have caused a delay in their waiver filing. While the Companies’ own statement appears to admit they were in violation of COMAR interconnection regulations since at least 2018, Staff does not recommend a civil penalty for this violation since usage of Power Flow is an aspirational goal for future regulations given the methodology’s benefits over the current set of Technical Screens in COMAR.

**Recommendation**

Staff recommends that the Commission approve Pepco and Delmarva’s request for a temporary waiver of COMAR 20.50.09.09A(4) and 20.50.09.10A(9) for good cause subject to the condition that the Companies fully communicate to any interconnection customer the reasoning for each screen [criteria] used to deny a future application when using Power Flow.

[De Andre T. Wilson](#)

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**CERTIFICATE OF SERVICE**

I hereby certify that a copy of Potomac Electric Power Company's Motion for Leave to Reply and Reply Comments was served on May 26, 2023 on all parties in Formal Case ET2023, FC1050 and RM40-2023 by electronic mail.

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