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PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA
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WASHINGTON, D.C. 20005

NOTICE OF INQUIRY

November 27, 2024

FORMAL CASE NO. 1182, IN THE MATTER OF THE INVESTIGATION INTO THE IMPLEMENTATION OF INTEGRATED DISTRIBUTION SYSTEM PLANNING FOR ELECTRIC UTILITIES,

1. By this Notice, the Public Service Commission of the District of Columbia ("Commission") invites interested persons to comment on the various matters related to electric utility distribution system planning and Integrated Distribution System Planning ("IDSP"). The Commission created a strawman proposal on IDSP and has attached it to this Notice of Inquiry ("NOI") as Appendix A. The Commission also identified prior filings that may be relevant to stakeholders when evaluating the strawman proposal attached to this NOI as Appendix B. Comments are due by January 31, 2025. Reply comments are due by February 28, 2025.

Background

2. The Commission has emphasized the need for transparency and quality reporting in the distribution system of the utilities it regulates.[1] IDSP focuses on optimizing and modernizing the distribution system to meet evolving demands from ratepayers. In addition to the traditional distribution planning that the District of Columbia's ("District") utilities undertake, IDSP incorporates advanced technologies, data analytics, and distributed energy resources ("DERs"), such as solar panels, energy storage, electric vehicles, demand response, energy efficiency, and federal and local policy. These planning activities have overlapping implications for the distribution infrastructure and operational dimensions that should be integrated to address the District's clean energy policies and goals. Because the Commission believes that IDSP may create a more resilient, flexible, and reliable distribution grid, the Commission seeks stakeholder input on the scope and direction of an IDSP for the District.

3. Many states are using IDSP as a tool to evaluate the current state of electric distribution systems and to observe what plans utilities have in place for developing their distribution systems in the future. Over 10 states are in various phases of implementing and

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[1] *Formal Case No. 1130*, *In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability* ("*Formal Case No. 1130*"), Order No. 20286, ¶ 37 ("We agree with [ ] stakeholders that the DSP/NWA process must be an iterative one. . . [and] additional information, including the outcomes of the studies, must be continually factored into the DSP/NWA process to improve it and ensure that Pepco is considering all appropriate NWAs and DER integrations into its planned infrastructure improvements.").

utilizing IDSP to achieve their long-term resilience and climate goals.[2] The Commission has already established several reporting requirements related to the electric distribution system; however, we are interested in creating a single repository to archive all IDSP-related filings. The Commission believes that aggregating related information from the existing dockets is not only administratively efficient, but it will also allow for a comprehensive review by all stakeholders of issues related to IDSP; improving their ability to effectively engage in the IDSP process. Additionally, the new IDSP docket would serve as a place for stakeholders to file comments on integrating a more comprehensive IDSP process as outlined in the strawman proposal—attached as Appendix A. The attached Appendix B identifies relevant reports the Commission believes should serve as a model for IDSP reports as well as studies and plans that should inform IDSP decision-making.

4. In Order No. 20286, the Commission determined that an interactive and stakeholder-informed process is necessary for distribution system planning.[3] The Commission has also ordered that new information, such as study outcomes, be integrated into ongoing DSP. This reinforces the Commission's stated intent to embrace new technologies alongside efficiency, equity, and utility revenue adequacy goals to improve the system's long-term sustainability and reliability.[4] The Commission intends to continue building and expanding upon the objectives and principles established in Order No. 20286, integrating them into IDSP to help the District achieve its stated climate and energy efficiency goals.

5. On November 12, 2024, the Office of the People's Counsel for the District of Columbia ("OPC") and the District of Columbia Government ("DCG") filed motions for reconsideration of Order No. 22313 in *Formal Case No. 1167*. OPC's Motion proposed the restructuring of *Formal Case No. 1167* to facilitate integrated, coordinated utility planning.[5] Similarly, DGC has asked that the Commission create a separate docket for IDSP.[6] OPC believes the structure of *Formal Case No. 1167* could be utilized to achieve the District's climate objectives if it employed a sufficiently integrated planning system instead of relying upon utilities to draft

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[2] *See e.g.* Maryland PSC Case No. 9665, Order Initiating Distribution System Planning Work Group, Order No. 89865, June 23, 2021. *See also* Maryland PSC, *DSP Technical Conference – 1/4/2024*, YouTube https://www.youtube.com/watch?v=89aL_44LZok&t=2451s.
See also, Minnesota Public Utilities Commission, Minnesota Integrated Distribution Panning Requirements for Xcel Energy, Docket E002/CI-18-251, August 30, 2018, https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={F05A8C65-0000-CA19-880C-C130791904B2}&documentTitle=20188-146119-01.

[3] *Formal Case No. 1130,* Order No. 20286, ¶ 37.

[4] *Formal Case No. 1130*, Order No. 20286, ¶¶ 37, 50 and 83.

[5] *Formal Case No. 1167, In the Matter of the Implementation of the Business Climate Plan* ("*Formal Case No. 1167*"), Office of the People's Counsel for the District of Columbia, Motion for Reconsideration of Public Service Commission Order No. 22313, filed November 12, 2024, at 9.

[6] *Formal Case No. 1167*, District of Columbia Government, Motion for Reconsideration of Public Service Commission Order No. 22313, filed November 12, 2024, at 18.

their own plans independently.[7] DCG asks that the Commission to draw upon and integrate national best practices for system planning as it develops IDSP procedures.[8] The Commission believes this Notice and the creation of a new case for IDSP, *Formal Case No. 1182*, will address the concerns raised in OPC's and DCG's motions.

6. The IDSP process should begin by identifying the near- and long-term objectives and the planning criteria that will drive the IDSP process. After identifying these objectives, engineers and analysts should perform best practice analyses to determine incremental grid needs, system changes, or changes to existing plans. Finally, experts should identify and evaluate potential solutions using risk-based engineering-economic methods. By following this general IDSP planning process, realistic goals and objectives can be set for the sustainable development of the energy distribution system.

7. The Commission acknowledges that a substantial amount of the information required to create the IDSP contemplated in the strawman proposal has already been filed with the Commission. The Commission expects stakeholders to use the filings referenced in Appendix B to inform their comments as they select what information should be included in the IDSP and identify any missing information. Additionally, the Commission expects stakeholders to utilize the strategic plans and studies filed before the Commission to expound upon their positions and determine what strategic plans and studies should be updated at regular intervals to enhance IDSP.

8. In addition to the filings in Appendix B, the Commission notes that by Order No. 22328 in *Formal Case No.* 1176, we ordered Pepco to file an updated Long Range Plan (LRP) within 180 days of November 26, 2024 in the IDSP docket, *Formal Case No. 1182*.[9] Upon receipt of the updated LRP, we invite stakeholder comments on how IDSP and the LRP can effectively interact to ensure a cohesive and effective approach to enhancing the District's energy goals and strengthening system reliability.

9. Stakeholders should consider the following guiding principles, which were developed by the Commission, when evaluating the strawman proposal in Appendix A. The Commission strongly prefers that distribution plans should:

- increase opportunities for early, meaningful stakeholder engagement through increased transparency and coordination;

- not include additional components, burdensome data requirements, and or process steps that do not contribute materially to meeting the IDSP goals established by the Commission;

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[7] *Formal Case No. 1167*, Office of the People's Counsel for the District of Columbia, Motion for Reconsideration of Public Service Commission Order No. 22313, at 3.

[8] *Formal Case No. 1167*, the District of Columbia Government, Motion for Reconsideration of Public Service Commission Order No. 22313at 18.

[9] *Formal Case No. 1176, In the Matter of the Application of Potomac Electric Power Company for the Authority to Implement a Multiyear Rate Plan for Electric Distribution Service in the District of Columbia*, Order No. 22328, ¶¶ 548, 549, and 592.

- be filed every three years, with annual updates in the interim to capture deviations and updates to filed distribution plans (*e.g.*, changes in load forecasts, spending projections, changes in reliability projections, updates to mapping, projected list of projects, etc.); and

- remain an uncontested case and to serve as an informational docket containing forward outlooks that will feed into Pepco's general rate case filings. All supporting data, exhibits, and testimony will continue to be required in any rate case filings that cite this informational docket, designed to present strategic vision and planning goals for each utility.[10]

Statutory Authority

10. In 2022, the Council of the District of Columbia ("Council") promulgated L22-257, the CleanEnergy DC Omnibus Amendment Act, which *inter alia*, created a general mandate for the Commission to consider "the conservation of natural resources and the preservation of environmental quality, including effects on global climate change and the District's public climate commitments" when regulating utilities and energy companies. The Omnibus Act also affirmed the District's goal to achieve its short- and long-term climate commitments, including reducing greenhouse gas ("GHG") emissions by 50% by 2032 and carbon neutrality by 2050.[11] Also in 2018, the Mayor committed the District to the Clean Energy DC Plan, which is a comprehensive strategy to reduce GHG emissions by 50% (relative to 2006) by 2032 and to carbon neutrality by 2050.[12] The goal of the Clean Energy DC Plan is to make the "energy system more sustainable, resilient, and equitable."[13] Finally, in 2022, the Council enacted the Climate Commitment Amendment Act of 2022, which requires the Mayor to adopt policies to reduce GHG emissions from both public and private sources by 60% by 2030 and to achieve carbon neutrality by 2045.[14]

11. The IDSP's primary purpose is to ensure that sustainable energy sources are properly integrated into the electric power system while maintaining a safe, reliable, resilient, and flexible distribution grid infrastructure that will address the District's clean energy policies and goals.

12. The law assigns the Commission a critical regulatory role that requires that in all cases we, and the utilities we regulate, take into account meaningful steps to achieve the District's energy and climate change commitments while ensuring affordable, reliable, and secure electric

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10 *See* Appendix A, Integrated Distribution Planning Strawman Position.

11 D.C. Code § 34-808.02 (2020 Supp.).

12 Clean Energy DC One Pager, August 2018.

13 Clean Energy DC One Pager, August 2018.

14 D.C. Law 24-176, Climate Commitment Amendment Act of 2022, September 21, 2022.

distribution service for all customers.[15] These recent directives from the District government mandate that the Commission consider how utilities will work towards the District's clean energy goals. The Commission believes that this NOI serves those goals.

Conclusion

13. Persons interested in commenting on the issues presented in this NOI shall file their comments no later than January 31, 2025, and reply comments no later than February 28, 2025. Comments may be filed with Brinda Westbrook-Sedgwick, Commission Secretary, Public Service Commission of the District of Columbia, at the Commission's website at https://edocket.dcpsc.org/public/public_comments. Persons with questions concerning this Notice should call the Commission Secretary's Office at 202-626-5150 or send an email to Naza Shelley at nshelley@psc.dc.gov or Hunter Davis at hdavis@psc.dc.gov.

[15] *Formal Case No. 1130*, Order No. 21141 ¶ 2.

INTEGRATED DISTRIBUTION SYSTEM PLANNING STRAWMAN PROPOSAL

I. PURPOSE AND OBJECTIVES/GOALS

a. Purpose

This is a proposal to create a framework for future integrated distribution system plan (IDSP) filings submitted by Pepco. The strawman proposal is provided with consideration given to prior Commission orders for content to be included in distribution plans, as well as prior interested party comments and discussion with Pepco. The length and content of the plans may change over time based on Commission order.

b. Objectives

The goal of an electric IDSP is to provide the Commission and other interested parties a comprehensive understanding of anticipated utility needs, priorities, and spending outside of the contested rate case process, and to allow such parties to properly evaluate significant and necessary investments to Pepco's distribution system.

The Commission has established overarching electric distribution system objectives for IDSP:

1. Maintain and enhance the safety, reliability, resiliency, cost-effectiveness, and affordability of the electric grid in a manner that is consistent and supportive of the District's energy goals.
2. Move toward the creation of efficient, cost-effective, accessible grid platforms for new products, new services, and opportunities for the adoption of new distributed technologies.
3. Ensure optimized utilization of electricity grid assets and resources to minimize total system costs.
4. Encourages more focus on supportive data than narrative, as distribution plans are not subject to formal approval by the Commission and do not authorize future cost recovery.
5. Align with Pepco's overall plan to meet the District's Clean Energy goals, such as strategies specifically addressing climate change impacts on infrastructure resilience and the Commission's PowerPath Vision Statement.
6. Create agreements that clarify if and how confidential information and Critical Infrastructure Information (CII) can be shared among stakeholders, including government agencies, other utilities, and third-party vendors, while ensuring compliance with security protocols. Where possible, anonymize data to minimize risks associated with sharing sensitive information.

A utility may adopt its own goals for the IDSP in addition to those set by the Commission.

II. SCHEDULE

Integrated Distribution System Plans must be filed every three years, or as otherwise ordered by the Commission, to an appropriate docket, and include a five-year investment plan and an extended (10-15 year) outlook from the date of the filing. The plan must address the specifics detailed below. This review is intended to provide Pepco the opportunity to update information within plan filings including, but not limited to, projections and forecasted costs to align with existing planning objectives. The update is intended to communicate changes in long-term strategy caused by unexpected shifts in forecasted metrics or costs and review benchmark performance against similar utilities to identify best practices and areas for improvement. Annual updates, if appropriate, shall be filed annually from the date of the utility's most recent distribution plan filing in an appropriate docket.

III. INTERESTED PARTY OUTREACH

As defined by the Commission, an IDSP must seek problem descriptions, goals, and possible solutions through community and third-party engagement. To encourage ongoing discussion between Pepco and interested parties, outreach and feedback opportunities will be made available by Pepco prior to and after an IDSP is filed.

a. Pre-Filing Outreach

The utility must hold at least one outreach meeting to collaborate with and engage the community, customers, and other interested parties in a manner timely enough to ensure input can be incorporated into the plan filing and not less than 12 months prior to the filing. At least half of all, with a minimum of one, outreach meeting(s) must be held outside of normal business hours within the District and convenient to customers. The utility is encouraged to invite interested parties, community leaders, interested community and advocacy groups, and Commission Staff. The outreach is intended to provide transparency into the utility distribution planning process and explore how its goals will affect the distribution system while obtaining input and exploring ideas for the distribution grid of the future. Hybrid meeting formats that include in-person, phone-in, and virtual options are recommended. For each meeting, the utility shall make the meeting contents publicly available and provide a forum for comments to be shared by parties unable to attend in-person.

b. Post-Filing Outreach and Comment Period

An appropriate docket will be made available for interested parties to file comments about the distribution plan after filing. Initial comments will be accepted for 60 days after the distribution plan filing and reply comments will be accepted for 30 days after the initial comment period. Comments and reply comments will be reviewed by the Commission and considered for future utility plan filings and process improvements.

IV. INTEGRATED DISTRIBUTION SYSTEM PLAN AND DOCUMENTATION

A recommended outline is provided in this proposal for integrated distribution system plans. This outline is broad and not intended to be all-inclusive for Pepco, but rather a starting point for IDSP encompassing prior Commission orders and expected supportive data while facilitating filing

consistency. If Pepco is unable to include one or more of the topics below, a detailed explanation shall be provided.

Where possible and relevant, an IDSP shall be coordinated with the inputs and outputs of other ongoing planning efforts required by the Commission including, but not limited to, planning as detailed in *Formal Case 1167*. IDSP spending classifications (such as programs, subprograms, and categories) shall be aligned with such classifications within Pepco's rate case, with variations explained in detail.

Pepco should submit supporting data and documentation. All supporting data for charts, tables, and maps shall be provided as an attachment, appendix, or workpaper to the submitted plan in an accessible format for interested parties to review. All external data sources and references must be appropriately cited. The following outline and topics are recommended for future IDSP:

1. Distribution System Overview

The IDSP will provide a data-based review of the current and recent historical system characteristics, asset health, and relevant operations to provide basis and context. The IDSP and updates should be in accessible formats that are easy to understand for non-technical stakeholders. Maps and GIS data are encouraged formats for this information, where appropriate.

a. Asset Health and Condition

The utility shall provide relevant data on its distribution system assets to provide the basis of its planning efforts. Relevant data includes, but is not limited to: age, condition (such as failure rates, outage/interruption causes, and quantifiable impacts from extreme weather events), location, planned upgrades, or decommissioning.

b. Historical Reliability Metrics

Pepco shall include SAIDI, SAIFI, CAIDI, and CEMI-3 metrics. Benchmarking of reliability metrics against peer companies in the industry shall be performed.

c. Historical O&M and Capital Spending

d. Historical Outage Events Affecting >1% of the Utility's Customer Base in the District

1. O&M and capital costs associated with catastrophic event recovery
2. If feasible, maps of affected service territory with configurations of impacted customers.

e. Operations and Programs

A brief discussion or summary of the utility's current operation strategy including, but not limited to:

1. Line clearing/vegetation management, including a map of the current vegetation management cycle as possible.
2. Storm response and restoration.
3. Asset management: Details regarding asset management must describe approaches applied in the utility's planning, efforts to prevent outages from occurring, and

reducing risk in a proactive manner. The plans shall not only focus on asset age, but also condition-based assessments performed through monitoring and inspections.

4. Overlay maps of planned and historic distribution system investments.

f. Resource Challenges

Descriptions of any recent historical or ongoing resource challenges, such as workforce or material supply.

g. Environmental Justice Mapping Analysis

An analysis of environmental justice within the utility's territory with a discussion on environmental justice and how it is incorporated in plans to support affected customers.

2. IDSP Action Plans

The utility shall include an action plan to address the established short-term and long-term challenges and needs. When a benefit-cost analysis is used in the action plan, the methodology, analysis, and alternatives of the analysis shall be detailed. If the utility chooses to use scenario planning, it must discuss the analysis performed and present potential challenges under each scenario. The action plans shall include the following:

a. Load Forecast

Discussion of load forecasting methodology and any deviations from previous methodology. Utilization of advanced analytics and modeling tools to enhance load forecasting and reliability projections, improving the accuracy of planning.

b. Forecasted Reliability Metrics (include five- and ten-year projections)

For the planning period, Pepco shall include, where able, SAIDI, SAIFI, CAIDI, and CEMI-3, mapped to planned system investments and expected improvements.

c. Forecasted O&M and Capital Spend Projections (include five- and ten-year projections)

d. Forecasted Workforce and Material Resources

Any resource challenges noted in Section 1 should be projected and quantified to its impact on system planning. When describing challenges, distribution plans must provide tangible examples of resource or material supply shortages and quantify the impact to system planning. Citing general market dynamics or the potential for global supply chain risks/bottlenecks are an insufficient basis when estimating future planning requirements.

e. Any Anticipated Changes to Operations and Programs from Section 1(e)

f. Resilience Approach and Planning

1. Vulnerability assessment.

2. Description of proposed resilience program(s), if applicable.
3. Projected costs and rate impacts.

g. Grid Modernization Efforts

The utility shall detail its efforts to address ongoing and upcoming distribution technologies and improvements to create a modern grid, including how each of the following topics is included or considered within the action plan:

1. Distributed Energy Resources (DERs): This section should include a discussion on DER deployment by type, size, and geographic dispersion, information on areas of existing or forecasted high DER penetration, and information on areas with existing or forecasted abnormal voltage or frequency issues that may benefit from the utilization of advanced inverter technology. There should also be an analysis of base-case, medium, and high scenarios regarding increased DER deployment.
2. Smart Grid Technologies: Integrate smart grid technologies into the planning process to enhance monitoring, control, and responsiveness of the distribution system.
3. Non-Wires Alternatives (NWAs): Provide detailed cost-benefit analyses of Non-Wires Alternatives versus traditional infrastructure investments to demonstrate their value.
4. Rebuilds/Hardening/Conversions
5. Undergrounding
6. Electrification Impacts (including Transportation Electrification Program integration): This can include, but is not limited to, forecasting of system load and impact from these topics on the distribution grid, O&M and capital costs of implementation, impacts to the utility's reliability, effects on local communities, and coordination with other Commission, District, and federal guidelines.

h. Hosting Capacity Analysis:

Discussion on how the hosting capacity map improves transparency by identifying interconnection points and necessary upgrades to the distribution grid to accommodate DERs

i. Customer Affordability Analysis

1. Spend prioritization
2. External funding opportunities exploration and grants
3. Customer rate impacts by customer class (residential, commercial, and industrial)

3. Third Party and Community Outreach

a. Summary of Pre-Filing Outreach Meeting(s), Sharing Outreach Date(s), Location(s), Issues Identified, Potential Solutions Explored, and Final Plan Impact.

b. Summary of Utility Customer, Community, and Local Government Outreach Effort(s), and Program(s), Sharing Issues Identified and Potential Solutions Explored.

4. Additional Requirements

This section encompasses any other elements ordered by the Commission in the appropriate IDSP docket(s) or other dockets since the previous distribution plan filing. If there are no other elements, this section may be removed.

PRIOR FILINGS RELATED TO INTEGRATED DISTRIBUTION SYSTEM PLANNING

I. TECHNICAL REPORTS

1. Potomac Electric Power Company, Annual Consolidated Report, *PEPACR2024-01-E*, filed April 15, 2024.
2. Potomac Electric Power Company, Monthly Service Outage Report for September 2024, *SO2024-01-E*, filed October 15, 2024.
3. Potomac Electric Power Company, Quarterly Electric Quality of Service Standards Report for Third Quarter, *EQSSR2024-01-E*, filed October 30, 2024.
4. Potomac Electric Power Company, Productivity Improvement Working Group ("PIWG") Meeting Minutes for July 19, 2024 PIWG Meeting, *PEPPIWGR2024-01-E*, filed August 13, 2024.
5. Potomac Electric Power Company, Status Report on Electric Company Infrastructure Improvement Activity ("Annual Report") as part of the District of Columbia Power Line Undergrounding ("DC PLUG") initiative, *Formal Case No. 1159*, filed September 30, 2024.
6. Potomac Electric Power Company, Second Quarter 2024 Performance Tracking Metric Report, *Formal Case No. 1156*, filed August 15, 2024.
7. Potomac Electric Power Company, Annual Distribution Transformer Report, *PEPADTR-2024-01-E*, filed May 31, 2024.
8. Potomac Electric Power Company, 2023 Across the Fence Report, *Formal Case No. 1119*, filed July 1, 2024.
9. Potomac Electric Power Company, Quarterly Interconnection Report for the Third Quarter in 2024, *Formal Case No. 1050*, filed October 29, 2024.
10. Potomac Electric Power Company, Monthly Interconnection Report, *Formal Case No. 1050*, filed October 15, 2024.
11. Potomac Electric Power Company, Semi-Annual Report on the Implementation of the Transportation Electrification Program, *Formal Case No. 1130*, filed August 1, 2024.

II. STRATEGIC STUDIES AND PLANS

1. Synapse Energy Economics, Inc., Study on the Value of Distributed Energy Resources, *Formal Case No. 1130*, filed October 25, 2023.
2. Potomac Electric Power Company, 5-Year Action Plan, *Formal Case No. 1167*, filed October 8, 2021.

3. Potomac Electric Power Company, 5-Year Action Plan: Benefits and Costs, *Formal Case No. 1167*, filed January 31, 2022.
4. Potomac Electric Power Company, Electrification Study, *Formal Case No. 1167*, filed August 27, 2021.
5. Potomac Electric Power Company, 30-Year Transition Strategy and Long Term Outlook at the Development of Climate Solutions in the District of Columbia, *Formal Case No. 1167*, filed November 30, 2021.
6. Potomac Electric Power Company, Climate Solutions Plan, *Formal Case No. 1167*, filed July 20, 2021.