PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA 1325 G STREET, N.W., SUITE 800 WASHINGTON, D.C. 20005

	POWER PATH DC ORDER									
								Ja	nuary 24	4, 2020
FORMAL	CASE	NO.	1130,]	IN THE	MATTER	OF THE	INV	ESTIG	ATION	INTO
MODERN		THE		ERGY	DELIVERY	Y SYST	EM_	FOR	INCRE	EASED
<u>SUSTAIN</u>	<u>ABILIT</u>	<u>Y</u> , Ord	ler No.	20286						
	Befo	re the (Commis	ssion:						
					Willie L. Pl	nillips, Cha	irman			
					Richard A.	-				
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I. INTRODUCTION

1. By law, the Public Service Commission of the District of Columbia ("Commission") has been prescribed a critical regulatory role that requires that we and the utilities we regulate take meaningful steps to achieve the District of Columbia's ("District") energy and climate change commitments.

- 2. If the District is to meet its targeted energy and climate goals in 12 years, then time is of the essence, and we will have to replace a business as usual approach with a consideration of options that result in a shift of the regulatory paradigm. Distributed energy resources ("DER") will play a vital role and will need to be integrated into the planning and operation of electric distribution systems, to achieve optimal system efficiencies, secure universal, affordable service, and enable the development of a resilient, climate-friendly energy system. The increased deployment of DER challenges the traditional public utility business model and the traditional operation of the energy distribution system that is becoming more customer-centric.
- 3. This initial PowerPath DC Order outlines the critical next steps the Commission and stakeholders will need to embark on to achieve the PowerPath DC vision. Moreover, these steps will help facilitate the District in meeting its energy and climate policies set forth in statute and in its clean energy, climate and sustainability plans.
- 4. By this Order, the Commission is taking the first of a series of steps that will bring grid modernization to fruition. This Order adopts, with modifications, the following seven (7) proposed decisions contained in the Final Working Group Report¹ and Staff Proposed Order No. 19984 ("Staff Order," "Order No. 19984" or "Staff Proposed Order"), issued in this proceeding on August 2, 2019:² (1) the Distribution System Planning ("DSP") and Non-Wires Alternative ("NWA") Process; 2) creation of a secure web portal; (3) the creation of a customer microsite for energy service providers; (4) the establishment of the rate design working group and the creation of a time of use rate; (5) the establishment of a microgrid proceeding; (6) the formation of the Pilot Project Governance Board; and (7) funding of various studies from the Modernizing the Energy Delivery System for Increased Sustainability ("MEDSIS") Pilot Project Fund Subaccount. The Commission also plans to publish a rulemaking proposing definitions for "advanced inverters" and "Non-Wires Alternative" as recommended in the Final WG Report. The Commission will address the remaining recommendations in the Staff Order and "Final Working Group Report" in the near future.

Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability ("Formal Case No. 1130"), Final Report v1.0 of the DCPSC MEDSIS Stakeholder Working Groups, filed May 31, 2019 ("Final WG Report or "Final Working Group Report").

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² Formal Case No. 1130, Order No. 19984, rel. August 2, 2019 ("Order No. 19984").

II. DISTRICT ENERGY POLICIES & GOALS

5. The Commission is required to ensure that every public utility doing business within the District of Columbia ("District") furnishes safe and adequate service at just and reasonable rates. Against this backdrop, in 2018, the Commission adopted the following MEDSIS Vision Statement:⁴

The District of Columbia's modern energy delivery system must be sustainable, well-planned, encourage distributed energy resources, and preserve the financial health of the energy distribution utilities in a manner that results in an energy delivery system that is safe and reliable, secure, affordable, interactive, and non-discriminatory.⁵

We believe that our initiative to modernize the District's energy delivery system vision recognizes our role in the District's plan to meet its targeted energy and climate goals and expected actions which are set forth below.

A. Sustainable DC⁶

6. In 2013, the District's sustainability plan, entitled *Sustainable DC*, was released following a collaborative effort involving the input and participation of thousands of members of the local community with a pledge to make the District the world's most sustainable city. The initiative brings a government-wide focus on environmental sustainability. *Sustainable DC* aims to make the District the healthiest, greenest, and most livable city in the nation by outlining several goals and targets to be met by the year 2032 to improve the areas of: (1) jobs and its economy; (2) health and wellness of District citizens; (3) equity and diversity; and (4) climate change and the environment. The *Sustainable DC* Plan's goals and targets complement *Clean Energy DC*. These include improvements to transportation, building energy efficiency, energy supply, and energy infrastructure will deliver the District's decarbonization in a way that also promotes resiliency, innovation, and local action.

B. Clean Energy DC⁷

³ See D.C. Official Code § 1-204.93 (2001).

By Order No. 19984, the Commission rebranded the MEDSIS Initiative as PowerPath DC. References in this Order to PowerPath DC can be assumed to include MEDSIS and vice versa.

Formal Case No. 1130, Order No. 19275, Attachment A, rel. February 14, 2018.

Sustainable DC, available at http://www.sustainabledc.org.

Clean Energy DC: The District of Columbia Climate and Energy Plan, August 2018. Available at https://doee.dc.gov/cleanenergydc.

7. In 2018, the District Department of Energy and Environment ("DOEE") released *Clean Energy DC*, the District Government's proposed roadmap of actions to increase the supply of zero greenhouse gas ("GHG") emission energy. The roadmap also proposed actions to modernize the energy delivery system to support sustainability, resiliency, interactivity, and affordability to meet the targeted goal of reducing the District's GHG emissions by 50% below 2006 levels by 2032 and achieving carbon neutrality by 2050. Additionally, *Clean Energy DC* proposes to reduce the District's energy use by 50% below 2012 levels by 2032 and increase the use of renewable energy to make up 50% of the District's energy supply by 2032.

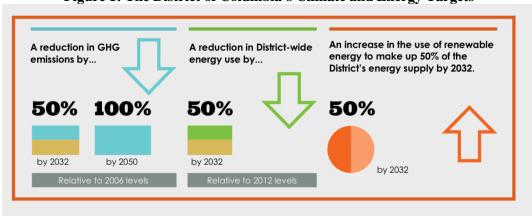


Figure 1: The District of Columbia's Climate and Energy Targets

Source: Clean Energy DC Plan

8. Clean Energy DC states that an electricity distribution system with a high number of local renewable energy systems will require a modernized electricity system to: (1) allow more renewable energy to be generated within the District; (2) improve the efficiency and reliability of the energy we use; (3) improve the resiliency of the District's energy system; and (4) provide economic benefits to District residents and businesses by reducing the need for costly utility infrastructure investments where possible. To increase the supply of zero GHG emission energy, Clean Energy DC recommends designing the District's Renewable Energy Portfolio Standard ("RPS") to require electricity suppliers to provide an increasing amount of renewable energy while also ensuring that electricity rates remain affordable for both District businesses and residents. Clean Energy DC also recommends that the District explore changes to the current Standard Offer Service ("SOS") that would increase the purchase of renewable energy and explore where neighborhood-scale energy systems such as microgrids and thermal energy districts could be expanded or installed.

The Clean Energy Plan required the renewable energy to reach 50% of the energy supply by 2032, this target was later amended by the CleanEnergy DC Omnibus Amendment Act of 2018 which requires the renewable energy to reach 100% of the energy supply by 2032. *See* CleanEnergy DC Omnibus Amendment Act of 2018, D.C. Law 22-257, effective March 22, 2019 ("CleanEnergy DC Act").

9. Clean Energy DC recommends that energy suppliers serving the District buy more electricity generated through renewable sources and layout strategies for increasing local renewable energy generation in the District. It encourages the development of innovative neighborhood-scale energy resources within the District so that it will not only increase the District's ability to use its own clean power but will also provide more efficient energy delivery by avoiding the need for costly and inefficient power delivered by transmission lines. Clean Energy DC states that these local energy resources can avoid, or quickly recover from, power interruptions or outages. To make sure the District's electric distribution system infrastructure can handle these changes, Clean Energy DC outlines actions that focus on modernizing the District's electricity distribution system. Modernizing the energy system allows the District to transition to solar and other renewable energy sources, while ensuring the system's reliability and also providing new ways to reduce energy use, save costs, and help make the power grid more resilient.

C. Climate Ready DC⁹

- 10. Climate Ready DC is the District's plan to adapt to a changing climate by acting to reduce the potential impacts of climate change to people, buildings, and infrastructure like water systems, roads and electricity and natural gas networks. Climate Ready DC suggests that the Commission ensure that climate risks are considered in utility rate cases for investments in new and upgraded infrastructure. DOEE worked with technical experts and stakeholders from District agencies, regional organizations, and the federal government, to assess the impacts of climate change on businesses and residents, especially those most physically and economically vulnerable during emergencies. DOEE will convene a group of diverse community stakeholders and city leaders to implement Climate Ready DC. 12
- 11. Climate Ready DC suggests that the Commission partner with DOEE to conduct site-level studies of extreme heat risk to electric grid infrastructure including transformers and overhead transmission and distribution lines and identify necessary upgrades and mitigation strategies. Climate Ready DC also suggests that the Commission partner with DOEE, the Historic Preservation Review Board, and the Zoning Commission to ensure that projects are allowed/encouraged to incorporate greater resilience during design and permitting.

D. Legislation

⁹ Climate Ready DC. Available at http://www.sustainabledc.org/climatereadydc.

Climate Ready DC at 1.

Climate Ready DC at 13; see D.C. Official Code § 34-808.02.

Climate Ready DC at 1.

Climate Ready DC at 13.

Climate Ready DC at 20.

12. The Council of the District of Columbia ("District Council") has articulated goals for increased deployment of renewables and carbon reduction in the District. The District Council adopted the Clean and Affordable Energy Act of 2008¹⁵ and a series of laws beginning with the Renewable Energy Portfolio Standard Act of 2004, ¹⁶ which created renewable energy portfolio standards to promote the generation of electricity through renewable resources.

- The CleanEnergy DC Omnibus Amendment Act of 2018 ("CleanEnergy DC Act"), 17 among other things, amends the Renewable Energy Portfolio Standard Act of 2004 by increasing the District's renewable energy portfolio standard to 100% by 2032, amends the Clean and Affordable Energy Act of 2008 to clarify factors the Commission must consider in decision making and establishes an energy efficiency program. 18 Additionally, the CleanEnergy DC Act requires the Commission to establish a working group with the Potomac Electric Power Company ("Pepco"), Washington Gas Light Company ("WGL"), DC Sustainable Energy Utility ("DCSEU"), and interested stakeholders to recommend long-term and annual energy saving metrics, quantitative performance indicators, and cost-effective standards to be adopted by the Commission for energy efficiency and demand response programs. The Commission established the Energy Efficiency and Demand Response Metrics Working Group¹⁹ in October 2019, and the working group has held six (6) meetings with its first meeting held November 1, 2019. The working group recommendations are due to the Commission on January 30, 2020.
- 14. The CleanEnergy DC Act authorizes the Commission to approve an application submitted by Pepco or WGL for approval of an energy efficiency and demand reduction program for their respective customers, including a multi-year

The "Clean and Affordable Energy Act of 2008," among other things, established a renewable energy incentive program in the District of Columbia; increased the renewable requirement, allow solar thermal to count as a Tier 1 solar resource, and increased the alternative compliance payment; established benchmarking requirements for all qualified public and private buildings; and amended the responsibilities of the Public Service Commission to require the Commission to consider the public safety, the economy of the District, the conservation of natural resources, and the preservation of environmental quality in supervising and regulating public utilities and energy companies. *See* D.C. Law 17-250, effective October 22, 2008.

[&]quot;Renewable Energy Portfolio Standard Act of 2004, D.C. Law 15-340, effective April 12, 2005.

CleanEnergy DC Omnibus Amendment Act of 2018, D.C. Law 22-257, effective March 22, 2019 ("CleanEnergy DC Act").

The Commission acknowledges that it issued a Notice of Inquiry in GD-2019-04-M inviting public comment on the analytical approach that it should take when considering the effects of a utility proposal on global climate change and the District's public policy commitments, including whether specific GHG emissions reporting requirements, metrics for GHG emissions reduction, and carbon footprint metrics should be used. Comments are due on January 13, 2020.

Formal Case No. 1160, In the Matter of the Development of Metrics for Electric Company and Gas Company Energy Efficiency and Demand Response Programs Pursuant to Section 201 (B) of the Clean Energy DC Omnibus Amendment Act of 2018, Public Notice, rel. October 3, 2019.

program and cost recovery mechanisms to provide full and current cost recovery as well as the approval of mechanisms to provide for a return on investment on capital and related costs, performance incentives, and surcharge mechanisms to be adjusted on at least an annual basis as approved by the Commission; *provided*, that the Commission finds the proposed program and cost recovery mechanisms as set forth in the application to be in the public interest and consistent with the District's public climate change commitments as determined by the Mayor, unlikely to harm or diminish existing energy efficiency or demand response markets in which District businesses are operating, and consistent with the long-term and annual energy savings metrics, quantitative performance indicators, and cost-effective standards established by the Commission.²⁰

III. BACKGROUND

- 15. Staff Order No. 19984 addressed the 32 recommendations filed by the MEDSIS working groups in their Final Working Group Report ("Final Working Group Report"). In the Staff Order, the Commission indicated that, due to the unprecedented nature of the MEDSIS proceeding, it would provide interested persons 45 days and 15 days from the date of the Staff Order to file additional Comments, which the Commission would consider in its final decision.
- 16. Initial Comments on Staff's Proposed Order were filed by the Office of the People's Counsel ("OPC"), ²² DOEE, ²³ Pepco, ²⁴ WGL, ²⁵ the Apartment and Office Building Association of Metropolitan Washington, ²⁶ Advanced Energy Management Alliance, ²⁷ DC Climate Action, ²⁸ Grid 2.0 Working Group ("Grid 2.0"), DC Consumer Utility Board ("DCCUB"), and DC Chapter of Sierra Club ("Sierra Club"), ²⁹ Solar

Formal Case No. 1130, Office of the People's Counsel's Comments, filed September 16, 2019 ("OPC's Comments").

D.C. Code § 8-1774.07(g)(5) and (6) (2019 Supp.).

Generally, Order No. 19984.

Formal Case No. 1130, District of Columbia Department of Energy and Environment's Comments, filed September 16, 2019 ("DOEE's Comments").

Formal Case No. 1130, Potomac Electric Power Company's Comments, filed September 16, 2019 ("Pepco's Comments").

Formal Case No. 1130, Washington Gas Light Company's Comments, filed September 16, 2019 ("WGL Comments").

Formal Case No. 1130, Apartment and Office Building Association of Metropolitan Washington's Comments, filed September 16, 2019.

Formal Case No. 1130, Advanced Energy Management Alliance's Comments, filed September 16, 2019.

Formal Case No. 1130, DC Climate Action's Comments, filed September 16, 2019.

Formal Case No. 1130, Grid 2.0 Working Group's Comments, filed September 16, 2019 ("Grid 2.0's Comments").

United Neighbors of D.C. ("DCSUN") and Pace Energy and Climate Center ("PACE"), ³⁰ Edison Electric Institute ("EEI"), ³¹ Energy Storage Association, ³² Fluence, ³³ GridWise Alliance, ³⁴ Oracle, ³⁵ PJM Interconnection, LLC, ³⁶ and Uplight Company. ³⁷

- 17. Reply Comments were filed by DOEE,³⁸ Pepco,³⁹ DCCUB/Sierra Club/Grid2.0,⁴⁰ and DCSUN and PACE.⁴¹
- 18. Because this Order only renders decisions on the seven (7) key topics identified above and the issuance of a notice of proposed rulemaking for NWA and advanced inverters definition, our discussion of the comments filed on the Staff Order will be limited to comments that address these key topics. However, as stated previously, since this is the first of a series of orders, the Commission intends to render decisions on the remaining recommendations in the coming year.

Formal Case No. 1130, Solar United Neighbors of D.C. and Pace Energy and Climate Center's Comments filed September 16, 2019. ("DCSUN/PACE Comments").

Formal Case No. 1130, Edison Electric Institute's Comments, filed September 16, 2019 ("EEI's Comments").

Formal Case No. 1130, Energy Storage Association's Comments, filed September 16, 2019.

Formal Case No. 1130, Fluence Energy's Comments, filed September 16, 2019.

Formal Case No. 1130, GridWise's Comments, filed September 16, 2019 ("GridWise's Comments").

Formal Case No. 1130, Oracle's Comments, filed September 16, 2019.

Formal Case No. 1130, PJM Interconnection, LLC's Comments, filed September 16, 2019.

Formal Case No. 1130, Uplight's Comments, filed September 16, 2019.

Formal Case No. 1130, District of Columbia Department of Energy and Environment's Comments, filed October 1, 2019 ("DOEE's Reply Comments").

Formal Case No. 1130, Potomac Electric Power Company's Reply Comments, filed October 1, 2019 ("Pepco's Reply Comments").

Formal Case No. 1130, Grid 2.0 Working Group, DC Consumer Utility Board and DC Chapter of Sierra Club's Comments, filed October 1, 2019 ("DCCUB DCCUB/Sierra Club/Grid2.0's Reply Comments"). DCCUB/Sierra Club/Grid2.0 filed a Corrected Reply Comments on October 4, 2019.

Formal Case No. 1130, Solar United Neighbors of D.C. and Pace Energy and Climate Center's Reply Comments filed October 2, 2019 ("DCSUN/PACE's Reply Comments"). DCSUN and PACE also filed a Motion to file Reply Comments Out of Time. The Commission hereby grants DCSUN and PACE's Motion.

IV. DISCUSSION

A. Distribution System Planning and Non-Wires Alternative Process

i. Working Group Recommendation and Staff Recommendation Order

- 19. In the Final WG Report, the Non-Wires Alternatives Working Group ("NWAWG") recommended that the Commission direct Pepco to move forward with the stakeholder-informed distribution system planning ("DSP") and NWA consideration process developed in the working group. 42 A majority of the stakeholders were in agreement with the initial framework of how the DSP/NWA process should operate, but DOEE while supporting the framework strongly advocated to modify the initial design⁴³ of the proposed DSP/NWA by including in between the Load Impact Factors ("LIF") and the Locational Constraint Reports ("LCR"), and in between the LCR and the NWA RFP issued by the utility, "a brief opportunity for review by government agencies to ensure that Pepco accurately incorporated the new data (provided by stakeholders) for LIF and the information in LCR are appropriately (i.e., not unduly restrictive or inflexible) reflected in the NWA RFP."44 Also, DOEE strongly believed "that these minor additions, which should not add more than 1 to 2 weeks per review to Pepco's process, would be key to ensuring that the new process provides a modicum of transparency and accountability without externalizing the planning function away from Pepco. Without these additions, the planning process runs the risk of remaining [the] utility black box that it currently is."45
- 20. After reviewing the Final Working Group recommendations, the Staff Order proposed that the DSP/NWA process contained in Recommendation 5.2.3 of the MEDSIS Working Group Report be approved with the following modifications: (1) the Commission will require Pepco to host an informational meeting for all interested persons between the LIF and LCR phases of the DSP/NWA process where Pepco can explain its methodology for calculating its load forecast and allow for comments and questions; (2) thereafter, the need and timing of Pepco's infrastructure NWA solution will be reviewed in a rate case to determine whether costs should be recovered; and (3) the Commission will require that the LCR and the parameters for NWA solutions included in the LCR be submitted for review and approval by the Commission at least for the first project under the new DSP/NWA process. The Staff Order also

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Final WG Report at 90. Figure 5.1.

Final WG Report at 90.

Final WG Report at 99.

Final WG Report at 99. Summary of stakeholder comments are referenced in Order No. 19984, ¶¶ 44-45, *see* also Final WG Report at 96-102.

Order No. 19984, ¶¶ 46-47. While we are adding this additional safeguard, it is unclear whether continued review and approval of Pepco's Locational Constraints Report will add efficiencies to the process. Thus, our requirement for continued Commission approval of the LCR may be rescinded in the future depending upon the circumstances.

recommended that the Commission direct Pepco to: (1) file a revised DSP/NWA process within 90 days; and (2) to submit a filing within 60 days from the date of the Order that: (a) provides a list of all projects that are currently under review or that have been budgeted for in their five (5) year planning process; and (b) accelerates the implementation process of this new DSP/NWA process to cover projects starting from 2023, or 3+ years.⁴⁷

ii. Stakeholder Comments to Staff Order

- 21. **Pepco.** In its Comments, Pepco states that it supports the staff-proposed directive to require Pepco to hold an informational conference between the Load Impact Factors Request for Information and the issuance of the Locational Constraints Report. Pepco believes this conference will advance its commitment to be collaborative and transparent, without disrupting the timeline envisioned for a DSP/NWA process. In this regard, according to its Comments, Pepco is willing to provide the Commission with a draft Locational Constraints Report for a one-month consultative review, while still issuing a Locational Constraints Report with all uncontested constraints, as scheduled. So
- 22. Pepco asserts that although it is committed to using the proposed DSP/NWA procedures to explore all possible solutions to identified capacity constraints, Pepco plans to continue its engineering design and other preparations for implementing traditional solutions by the targeted in-service date, should NWA solutions not be cost effective or be inadequate to maintain reliability in that instance. ⁵¹
- 23. Pepco states that the DSP/NWA process "provides more opportunities for District CBE and MBE businesses to participate in solutions for District capacity constraints." Consequently, Pepco proposes that the DSP/NWA process be preceded by an informational meeting that would be specifically designed to allow District businesses to better understand and prepare to participate in the NWA RFP process. 53

⁴⁷ Order No. 19984, ¶¶ 48-49

Pepco's Comments at 13.

Pepco's Comments at 13.

Pepco's Comments at 13.

Pepco's Comments at 18.

Pepco's Comments at 19.

Pepco's Comments at 19.

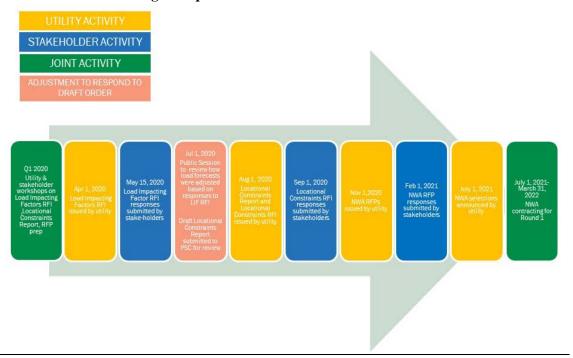


Figure 2: Distribution System Planning Process Adjusted to Reflect Changes Requested in Draft Order – Round 1 Dates

Source: Pepco's Initial Comments on Proposed Order No. 19984

- 24. The timeline envisioned by Pepco in its Comments provides that if a final PowerPath DC order is issued by the close of 2019, the Company is prepared to implement the DSP/NWA process on April 1, 2020, and thereafter release an RFP in 2021 that would call for contracting and execution by the end of 2022. Pepco notes, however, that a single capacity constraint could be subject to multiple NWA solutions, resulting in multiple solicitations in either a single annual cycle or over a number of annual cycles. 55
- 25. **DOEE.** In its Comments, DOEE reiterates its request to have a technical review by DOEE and the Commission at two stages in the DSP process: (1) between LIF and LCR, to receive load forecasting methodology and the process for triggering load constraints; and (2) between LCR and the NWA RFP to determine which projects can be bid either fully or partially-offset by NWA solutions. DOEE asserts that the two-week review period will not cause undue delay as argued by Pepco. ⁵⁶
- 26. **EEI.** On October 1, 2019, EEI filed Comments to the Staff Order stating that while the Commission's Staff proposes a "stakeholder-informed distribution planning process.' [It] wishes to note that stakeholder-driven processes . . . can be

Pepco's Comments at 17.

Pepco's Comments at 17.

DOEE's Comments at 7.

lengthy, potentially jeopardizing progress. Since distribution system planning is based on time-specific data and forecasts, delays in the process can be detrimental to ultimate objectives."⁵⁷ Therefore, EEI encourages "consideration of the impact of delays, should the Commission move forward with such an open planning process."

- 27. **GridWise.** GridWise commented noting that the "directive ordering Pepco to launch a transparent and collaborative Distribution System Planning Process (DSP) that has a clear, rigorous and firmly set timeline; that balances the need for considering innovative solutions to system needs with the imperative to maintain system reliability and affordability; and that retains ultimate utility responsibility for making decisions that will impact system performance." Furthermore, GridWise stated that as a participant in the stakeholder process they can attest to "the significant input a variety of local and national stakeholders had in crafting this proposed approach" and "are confident it will be a national model." ⁵⁹
- 28. **DCSUN and PACE Comments & Reply.** In their Initial comments on Staff's Proposed Order, DCSUN/PACE recommend that the DSP must be revised to address a number of issues, especially the inclusion of a comprehensive, uniform Benefit Cost Analysis ("BCA") framework to guide decision-making. 60 A BCA framework is essential to allow utilities to effectively evaluate and source nontraditional grid services through DER. DCSUN/PACE supports "per DOEE's comments, to include an interim stakeholder engagement stage, including regulatory agency review, between the LIF and LCR stages."61 In their Reply Comments DCSUN/PACE state that Pepco's statement that "it would need to look at capacity projects that have an in-service date for the traditional solution of 60-months or more when initially implementing the DSP/NWA process" warrants reconsideration because "it is possible for Pepco to implement a non-wires alternative ('NWA') for a smaller traditional solution with a sooner in-service date" such as 36- to 60-months in-service date for bigger projects (i.e., major circuit or substations for NWA projects) and 18-to 24-months in-service date for smaller projects at the feeder level or below.⁶² Furthermore, DCSUN and PACE note that "while it is important for Pepco to allow time for preparation, procurement, and contingencies in their distributed system planning ('DSP') process, Pepco's DSP process must be inclusive and flexible enough that it does not unduly limit or eliminate projects from consideration."⁶³

⁵⁷ Formal Case No. 1130, EEI's Comments.

⁵⁸ GridWise's Comments at 2.

GridWise's Comments at 2.

DCSUN/PACE's Comments at 8. DCSUN/PACE's Comments are not paginated; therefore, the Commission refers to page numbers beginning with the first page of the document.

DCSUN/PACE's Comments at 6.

DCSUN/PACE's Reply Comments at 3.

DCSUN/PACE's Reply Comments at 3.

29. **Pepco Reply.** Pepco asserts that the PowerPath DC proceeding reflects the Commission's contribution towards the District meeting its ambitious clean energy goals, while also delivering a modern, technologically sophisticated distribution grid that is not only sustainable, but also reliable, safe and secure, resilient, well-planned, interactive and non-discriminatory. Pepco asserts that its distribution system in the District has evolved from one that provides one-way power flows, designed around large, centralized generation to a system that allows two-way power flows with numerous smaller sources of generation. ⁶⁴ According to Pepco, its system will use new technologies to increase hosting capacity for DERs and to develop a more efficient DER interconnection process. ⁶⁵

- 30. Pepco recognizes that the underlying vision for a smart grid implementation plan must be a shared vision, and for that reason, has begun a collaborative, stakeholder-informed DSP/NWA process. Although it is committed to such transparency, Pepco emphasizes that it bears the responsibility for that platform's reliability and performance, and that it will be implemented in a manner that is valuable to all of the District's residents, businesses and institutions. In this regard, the Company states that "Pepco must retain the ability to exercise control over or directly make the investments needed to ensure reliability, resiliency and affordability relative to the value gained."
- 31. Pepco believes that the modified DSP/NWA process (set out on page 21 of its Comments) addresses the preponderance of the Comments raised by other commenters, without imposing undue delay in implementing the DSP/NWA process or making the process untenable. ⁶⁹
- 32. **DOEE Reply.** In reply to Pepco's references to NWA in its discussion of the DSP process, DOEE clarifies that NWA is only a component of integrated distribution resourcing planning ("IDRP") and does not, in and of itself, constitute an IDRP. "It is important as the District moves towards an IDRP framework," DOEE states, "not to conflate the two." DOEE also agrees with Pepco's characterization of the proposed NWA filing being a substantial outcome from the PowerPath DC process. DOEE cautions that "NWA solutions should be more than just

Pepco's Reply Comments at 5.

Pepco's Reply Comments at 5-6.

Pepco's Reply Comments at 10.

Pepco's Reply Comments at 10.

Pepco's Reply Comments at 10.

⁶⁹ Pepco's Reply Comments at 17.

DOEE's Reply Comments at 2.

DOEE's Reply Comments at 2.

DOEE's Reply Comments at 2.

solutions that are 'cost effective.' Rather, they are the solutions to which a rigorous Benefit Cost Analysis (BCA) framework has been applied that accounts for greenhouse gas (GHG) impacts and other externalities." Consequently, DOEE agrees with Pepco that "the compensation structure for utility investments should be aligned to incentivize the deployment of NWA solutions." DOEE asks to participate in a technical review of the draft Locational Constraints Report that Pepco states it will provide to the Commission for a one-month consultative review.

- 33. Pepco stated in its Comments that it expects that a 60-months in-service date criterion can be reduced as the District's experience with NWA solutions increases and available technologies continue to mature. In reply, DOEE notes that the Commission has requested the in-service date criterion be set to three (3) years, and DOEE supports this decision. In this regard, DOEE concludes that the DSP/NWA process timeline described in Pepco's Comments "should also result in projects being put in-service within a 3-year timeline." In addition, "DOEE clarifies that there are existing and mature technologies and demand-side management strategies that can be used as NWA, such as: energy efficiency, demand response, battery storage, and customer-sited DER."
- 34. DOEE noted that Pepco commented that if the DSP/NWA process takes too long from inception through execution, the load constraint for which an NWA is being offered may have changed and the NWA may no longer solve the problem. ⁸⁰ In reply, DOEE states that it does not view an NWA as inflexible as Pepco's comment suggests. ⁸¹ According to DOEE, an NWA process can be designed to accommodate such flexibility; any well-designed distribution resource planning process, including NWA procurement, in the District can be flexible enough to accommodate changing circumstances and new information. ⁸² The real issue behind the problem offered by Pepco, DOEE suggests, maybe with Pepco's load forecasting methodology. ⁸³

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DOEE's Reply Comments at 2.
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DOEE's Reply Comments at 2.

DOEE's Reply Comments at 7, *citing* Pepco's Comments at 13, 20.

DOEE's Reply Comments at 7, *citing* Pepco's Comments at 17.

DOEE's Reply Comments at 7.

DOEE's Reply Comments at 8.

DOEE's Reply Comments at 7.

DOEE's Reply Comments at 8, *citing* Pepco's Comments at 18.

DOEE's Reply Comments at 8.

DOEE's Reply Comments at 8.

DOEE's Reply Comments at 8.

35. According to DOEE, a load forecasting methodology is a critical piece of a successful NWA planning process and should be capable of forecasting multiple scenarios for load growth and DER, allowing for resource planning that fits the model of a grid as a platform. A reduction in the number of identified constraints as a result of improved load forecasting will likely decrease the number of NWA projects, however, DOEE does not see the sheer number of projects as the metric of success for an NWA process. Rather, a successful NWA process will identify only those load constraints that require upgrades, and either defer or supplant them in a manner that is consistent with the District's climate goals and save money for the ratepayer."

36. DOEE notes in its Reply Comments that DC Sun has urged the Commission to open a rulemaking to implement and oversee the DSP process. In this regard, DOEE "supports the opening of a rulemaking by the Commission to oversee the proposed NWA process, [one] that could iteratively be transformed into a full-fledged IDRP process." Similarly, DOEE agrees with the Grid 2.0 Working Group that the grid modernization process, including increased grid efficiency, must be implemented according to an overarching framework governed by the Commission. 88

iii. Commission Decision

- 37. The Commission agrees with Staff's proposal to approve with minor changes the NWAWG's proposed DSP/NWA process that includes a stakeholder-informed process for collecting input from stakeholders on load forecasting and NWA considerations as reflected in Pepco's Comments and Figure 2 above. We agree with DOEE and other stakeholders that the DSP/NWA process must be an iterative one. While we understand that DOEE would like to insert another step in the process, we also acknowledge and support the view of others that it is important to implement a stakeholder-informed process as soon as possible. Also, we believe 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.⁸⁹
- 38. We also recognize that the proposed implementation timeframe included in Pepco's comments was contingent on a final decision being rendered in 2019. Therefore, we direct Pepco to submit a revised DSP/NWA implementation timeframe within 30 days from the date of this Order that reflects the inclusion of the stakeholder

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DOEE's Reply Comments at 9.

DOEE's Reply Comments at 9.

DOEE's Reply Comments at 12.

DOEE's Reply Comments at 12.

DOEE's Reply Comments at 13.

The Commission recognizes that the DSP/NWA process may need to be memorialized in future rulemaking.

informational meeting. Moreover, the Commission supports an accelerated implementation of DSP/NWA process in three (3) years for projects with an in-service date of 2023 and beyond and directs that the revised DSP/NWA implementation timeframe apply to any planned Pepco infrastructure projects for which a notice of construction is not required or has not been filed. 90

B. Creation of a Secure Web Portal for Data Sharing

- i. Working Group Recommendation, Staff Order Recommendation, and Comment to Staff Order
- 39. The Data and Information Access Alignment Working Group (DIAAWG) recommended that the Commission direct Pepco to create a secure web portal and non-disclosure agreement ("NDA") process to enable system-level data flow between third parties and the utilities for RFP responses and programmatic data requests pertaining to the MEDSIS Pilot Project process. 91 More specifically the secured portal is to "facilitate the sharing of non-public, locationally-specific system-level data between the utility and third parties responding to RFPs and with the government agencies developing DER programs."92 Given the overwhelming support for the creation of this secure web portal, the Staff Order proposed approval of this recommendation and that WGL should create a comparable secure web portal. 93 Also, Staff mentioned "that increased data sharing is necessary to facilitate the successful implementation of the MEDSIS Pilot Projects and Pepco's new distribution system planning (DSP) process" given the vast level of data sharing that is to come with grid modernization overall in the District.⁹⁴ In its Comments, Pepco states that it supports the directive to "implement a secure web portal for RFP response and programmatic requests" and that "execution of an NDA as well as completion of a background check in order to ensure system security" will be required of all third parties. 95 WGL states that while it "does not object to establishing a portal for data requests/responses that are directly related to MEDSIS Pilot Project RFPs, as this is the Company's standard procedure for facilitating data requests/responses in a formal rate case before the Commission."⁹⁶ However, WGL states that it "issues RFPs each year that are part of

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Any traditional solution or non-wires alternative solutions, to the extent applicable, remain subject to Chapter 21 of the Commission's rules concerning the "Provisions for Construction of Electric Generating Facilities and Transmission Lines." 15 DCMR § 2100 *et seq.* (2004).

Final Working Group Report at 73.

⁹² Final Working Group Report at 73.

Order No. 19984, ¶ 31. Summary of stakeholder comments are referenced in Order No. 19984, ¶ 30, *see also* Final WG Report at 75.

⁹⁴ Order No. 19984, ¶ 31.

Pepco's Comments at 11.

WGL's Comments at 4.

the normal course of business" and that "establishing a portal for data requests/responses for these types of RFPs is inefficient and unnecessary." ⁹⁷

ii. Commission Decision

40. The Commission accepts Staff's recommendation, and therefore, approves DIAAWG's 5.1.8/5.1.10 proposals for Pepco and WGL to create a secure web portal as referenced in paragraph 31 of Order No. 19984. Although WGL raised concerns about data sharing beyond the MEDSIS Pilot Projects, the Commission agrees with the Staff Order that, for example, the secure web portals should also be set up to handle two-way data flow from service providers to the utilities. As a point of clarification, the utilities should develop and report on the status of implementing the secure web portals within 120 days of the date of this Order. Given that the Commission is also approving the DSP/NWA process as discussed in Section A above, the Commission finds that employing this data sharing process beyond the MEDSIS Pilot Projects is appropriate.

C. Customer Energy Service Provider Micro-Site

- i. Working Group Recommendation, Staff Order Recommendation, and Comment to Staff Order
- 41. Final WG Report Recommendation 5.4.2 recommended that the Commission create a new stand-alone website or enhance our existing website to house up-to-date competitive energy supplier offers as well as energy education material that would aid customers in evaluating offers. The Customer Impact Working Group ("CIWG") also recommends that a marketing campaign should accompany the availability of this new website to increase customer awareness of the site. Staff proposed that the Commission's Office of Consumer Services ("OCS"), in conjunction with the Commission's Office of Technical and Regulatory Analysis ("OTRA") be directed to: (1) develop an interactive micro-website linked to the Commission's website to house up-to-date competitive energy supplier offers as well as energy education material that would aid customers in evaluating offers as discussed in the Final WG Report; (2) design a marketing campaign to accompany the launch of this new micro-website to increase customer awareness of the site; and (3) require the results of these directives be submitted to the Commission for review and approval within 180 days from the date of the Staff Order. 100

ii. Commission Decision

WGL's Comments at 4.

⁹⁸ Order No. 19984, ¶ 31.

⁹⁹ Order No. 19984, ¶ 31.

¹⁰⁰ Order No. 19984, ¶ 73.

42. During the MEDSIS CIWG meetings the participants believed that one of the factors leading to the lack of switching among residential customers in the District was the difficulty consumers faced in understanding how to evaluate their offers and the lack of an official, trusted source of suppliers' offers. Of Given the vast support for a Retail Choice Microsite by stakeholders and to enhance consumers ability to shop around for competitive offers, the Commission agreed with Staff's Order to create a Retail Choice Microsite, as referenced in Order No. 19984, paragraphs 72-73 and took subsequent action, using its general funds, to begin development of the microsite in 2019. The Commission believes this new enhanced interactive site will give District residents the flexibility to review current supplier offers by using the microsite's interactive calculators, comparison tools, toggles, and graphs. The Commission's goal is to make the energy retail choice shopping experience effective and user friendly. The microsite will be integrated with the Commission's existing website and will be branded as the official site to shop for suppliers' offers. Through this integration process, competitive energy suppliers will have the opportunity to log-in to update their offers as frequently as they deem necessary. Energy suppliers will have an offer submission form that will contain among other things their rate schedules (fixed or variable), offer price per kWh (allowing up to 15 individual offers per supplier), contract length, renewable energy fuel mix, related fees, offer details (to include promotional offers and introductory rates), terms of service, and a sign-up link.

43. Development of the microsite is expected to be complete by the second quarter of 2020 as reflected in the table below.

Analysis and Kickoff	December 2019 (completed)
Design Component	January 2020 (currently under review)
Technical Component	February 2020
Testing and Deployment	2 nd Quarter 2020
Kickoff Marketing Campaign	2 nd Quarter 2020

44. Finally, as reflected in the above table, Staff also recommended approving the CIWG's request that a "marketing campaign [] accompany the availability of this new website to increase customer awareness." Therefore, the Commission directs that a marketing campaign be included to guide and educate consumers on how to evaluate competitive energy supplier offers and use the microsite.

D. Rate Design Working Group

i. Working Group Recommendation

Final WG Report at 143.

¹⁰² Order No. 19984, ¶ 70.

45. The Rate Design Working Group ("RDWG") investigated the impact of rate design on DER adoption, evaluated alternative rate designs, and addressed the basis for setting rates and proper cost causation and realization. The RDWG discussed rate structures and alternative rate designs and regulatory models for the purpose of achieving the MEDSIS Vision. Additionally, the RDWG evaluated alternative rate designs and regulatory models with respect to, among other things, fundamental principles of ratemaking (e.g., cost causation, rate gradualism, etc.) as well as their effect on DER adoption. The two distinct items addressed in the RDWG section of the WG Report are: (1) rate design, *i.e.* how Pepco's rates charged to individual ratepayers are structured, and (2) alternative forms of regulation ("AFOR"), including performance based rates, are utilized to incentivize Pepco's actions.

46. The Commission is presently considering AFORs in *Formal Case No.* 1156 as outlined in Order No. 20273. How Pepco's rates are designed and structured is addressed below.

ii. Staff Order Recommendation

47. As concerning dynamic pricing, Staff recommends that the Commission convene a Dynamic Pricing Working Group for a period not to exceed 12 months to develop a specific residential dynamic pricing program. 105 Staff recommends that participation in the Dynamic Pricing Working Group should be open to the public, including new stakeholders not engaged with the Rate Design Working Group To facilitate the Working Group's efforts Staff recommends that the Commission direct Pepco to file with the Commission a strawman residential dynamic pricing proposal (e.g., Critical Peak Rebate like in Pepco MD or other forms of dynamic pricing, including time-of-use rates) within 60 days of the date of the Proposed Order. Pepco's filing shall include: (1) an explanation of all identified benefits and costs, as well as any PJM market revenue concerns, ¹⁰⁶ and (2) an explanation of how its proposal compares to dynamic pricing programs at other Exelon utilities. Lastly, Staff recommends that any interested persons should file any comments within 30 days of Pepco's filing, after which the Commission will set a date for the first Dynamic Pricing Working Group meeting.

iii. Stakeholder Comments to Staff Order

Final WG Report at 17, 30.

See Formal Case No. 1156, In the Matter of the Application of Potomac Electric Power Company for Authority to Implement a Multiyear Rate Plan for Electric Distribution Service in the District of Columbia ("Formal Case No. 1156"), Order No. 20273, rel. December 20, 2019.

¹⁰⁵ Order No. 19984, ¶ 63.

Order No. 19984, n.106. ("Pepco should review and address, as appropriate, the Federal Energy Regulatory Commission's recent price responsive demand order. *See PJM Interconnection, L.L.C.*, 'Order Rejecting Tariff Revisions,' 167 FERC ¶ 61,268 (2019)").

48. **GridWise Initial Comments.** Concerning rate design, GridWise states that a "strong dynamic pricing program can have meaningful impacts, but it must be broadly adopted." Additionally, GridWise expresses support for a working group to develop a dynamic pricing program.

49. **Pepco Initial and Reply Comments.** Pepco strongly supports the proposed directive to reconvene the Dynamic Pricing Working Group and believe it to be an important tool in meeting the District's long-term clean energy goals by reducing peak energy usage. In addition, Pepco commits to submit a strawman proposal for consideration by the Dynamic Pricing Working Group when it is convened, as proposed in Directive 5.3.1. Further, Pepco believes it can have a Dynamic Pricing program in place for the 2021 cooling season if the working group can complete its work in time for the Commission to approve a Dynamic Pricing program by the fourth quarter of 2020. In its Reply Comments, Pepco states, with its interest in Dynamic Pricing programs are part of its goal of reducing the grid's peak load relative to its base load.

iv. Commission Decision

50. A critical component to modernizing the District's energy delivery system and reaching the District's climate and energy goals is to develop a good rate design that works in concert with clean technological innovations. Accomplishing this requires the application of well-established principles to inform the design of rates that promote economic efficiency, equity, and utility revenue recovery. An important concern when designing rates is ensuring that service is affordable to all customers. Thus, rate design will be essential in a future that is characterized by significant customer-side resource investment and smart technology deployment. The advantages of embracing efficiency, equity, and utility revenue adequacy goals are significant, especially in maintaining the District's competitiveness, promoting customer choice and embracing innovation. Unleashing the potential of new technologies will also require consideration of changing stakeholder interests.

- 51. Best practice rate design solutions should balance the goals of:
 - Assuring recovery of prudently incurred utility costs;
 - Maintaining grid reliability;

GridWise's Comment at 2.

Pepco's Comments at 23.

Pepco's Comments at 23.

Pepco's Comments at 23.

Pepco's Reply Comments at 25.

- Assuring fairness to all customer classes and sub-classes;
- Assisting the transition of the industry to a clean energy future;
- Setting economically efficient prices that are forward-looking and lead to the optimum allocation of utility and customer resources;
- Maximizing the value and effectiveness of new technologies as they become available and are deployed on, or alongside, the electric system; and
- Preventing anti-competitive or anti-innovation market structures or behavior.
- 52. Considering the changes that will occur from efforts in PowerPath DC to better serve utility consumers and ensure that the District meets its targeted energy and climate goals, there will be a need to consider new and sophisticated methods of designing the rates charged to customers. These methods will require new rate design solutions that include among other proposals, dynamic pricing and time-of-use rates. 112
- 53. In this instance the Commission generally accepts the recommendation in the Final WG Report but has decided not to reconvene the Dynamic Pricing working group. ¹¹³ Instead, the Commission reconvenes the Rate Design Working Group ("RDWG") that will be responsible for a holistic evaluation and assessment of current rate designs in the District and other jurisdictions in order to propose best practice rate design solutions identified above including a new residential Dynamic Pricing program. Stakeholders interested in becoming RDWG members are directed to notify the Commission Secretary within 14 days from the date of this Order. The Commission Staff will convene the RDWG meetings by notice within 60 days of the date of this Order.
- 54. The Commission recognizes that simpler rate design approaches, like residential time-of-use rates can be developed as pilots on an accelerated timeframe. On April 12, 2019, the Commission approved Pepco's proposed Residential Whole House Time-Of-Use Rate concept for electric vehicles in Order No. 19898. Because Pepco has some experience with time-of-use rates 115 the Commission directs Pepco to

Lazar, J. and Gonzalez, W. (2015). Smart Rate Design for a Smart Future. Available at: http://www.raponline.org/document/download/id/7680.

Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability ("Formal Case No. 1130"), Final Report v1.0 of the DCPSC MEDSIS Stakeholder Working Groups at 119, filed May 31, 2019 ("Final WG Report").

Formal Case No. 1130, and Formal Case No. 1155, In the Matter of the Application of the Potomac Electric Power Company for Approval of Its Transportation Electrification Program ("Formal Case No. 1155"), Order No. 19898, ¶ 36, rel. April 12, 2019. Subsequently, Pepco submitted the proposed tariff in compliance with the order.

The Commission notes that other Exelon affiliates--Commonwealth Edison, Baltimore Gas and Electric Company, Pepco-Maryland, and Delmarva Power & Light Company--have proposed time-of-use

prepare a pilot residential time-of-use ("TOU") rate proposal, within 45 days of the date of this Order and file it with the Commission. To speed development of a TOU pilot rate, Pepco should assume participants are limited to Standard Offer Service customers, and do not have electric vehicles or behind-the-meter generation.

E. Microgrid Proceeding

- i. Working Group Recommendation and Staff Order Recommendation
- 55. The Microgrid Working Group ("MWG") was initially tasked to review Microgrids as directed in Order No. 19432, to look into microgrid development in the District, benefits and costs of microgrids, and provide recommendations addressing microgrid ownership, operation, standards and implementation. The MWG was also directed to address additional questions as it pertains to microgrid development in the District. 117 Upon review of the specified questions, the MWG recognized that given the large variances of microgrid types, the current statutory framework of the Commission presents challenging issues. 118 The Staff Order recognized the Commission's authority to regulate microgrids if it determines that they are acting within the definition of a "public utility." Staff refrained from proposing additional regulatory pronouncements due to a pending case, Formal Case No. 1153, regarding the operation of Walter Reed's Redevelopment Site ("Walter Reed") electric distribution system. 119 The Staff Order noted that "at the conclusion of the pending case, the Commission will initiate a proceeding to address the microgrid recommendations . . . and our overall regulatory authority in this matter." ¹²⁰
 - ii. Stakeholder Comments on Staff Order
- 56. **DOEE Initial and Reply Comments.** DOEE requests that the Commission reconsider the lack of ruling on major issues related to microgrids and establish a microgrid roadmap. DOEE views microgrids as a key tool to increasing the potential for renewable energy integration in the District and supports: (1) the creation and light regulatory treatment of a "Microgrid Operator;" (2) the establishment of a

pilot program proposal that have received approval from regulators in Illinois (*see* Consolidated Case Nos.18-1725 and 18-1824) and Maryland (*see* PC44).

Formal Case No. 1130, Order No. 19432, ¶ 6, rel. August 9, 2018.

Final Working Group Report at 32.

Generally, see Final WG Report 167-222.

Formal Case No. 1153, In the Matter of the Potomac Electric Power Company's Petition for an Investigation into the Status of Walter Reed's Electric Distribution System ("Formal Case No. 1153"), Order No. 19721, rel. October 19, 2018.

¹²⁰ Order No. 19984, ¶ 96.

working group to develop appropriate tariff schedules for microgrids; and (3) updating the Commission's interconnection regulations to include storage integration and rules governing islandable systems. DOEE also reiterates its recommendation to do a Solar Neighborhood Microgrid project. DOEE notes that Pepco supports the finding in the Staff Order that the Commission has jurisdiction to regulate microgrids that are acting within the definition of a "public utility;" however DOEE seeks to clarify that the microgrids to which Pepco is referring are multi-customer microgrids. 123

- 57. **EEI.** EEI "agrees with the Commission that it has jurisdiction to regulate microgrids when they act as a public utility." EEI believes that "[t]he Commission has the information necessary to state affirmatively that it will regulate certain microgrids when they act as public utilities, and [] [they] urge the Commission to do so in this order rather than delay progress on all microgrids." ¹²⁴
- Pepco Initial and Reply Comments. Pepco supports the proposed finding that the Commission has jurisdiction to regulate microgrids that are acting within the definition of a public utility. 125 However, Pepco disagrees with DOEE's request that the Commission create a "Microgrid Operator" entity and also disagrees that the regulatory flowchart (which it claims was submitted by DOEE and rejected by stakeholders during the working group process) could lay the foundation for developing a microgrid roadmap. 126 Pepco also opposes the notion of "light touch" regulation for multi-customer microgrids as undermining the Commission's authority. contends that if a microgrid operator were to own equipment used to distribute electricity to multiple customers, then it would be performing a function essentially the same as Pepco and for that reason should be subject to the same regulations encountered by Pepco. 127 Pepco notes that DOEE asserts that current interconnection and tariff frameworks are acting as roadblocks to microgrids. Pepco asserts this is incorrect and the primary roadblocks to microgrid development are economic. ¹²⁸ In support, Pepco describes that it currently offers significant cooperation to microgrid developers to attempt solutions that reduce costs to the developer or to identify broader functionalities to offset some portion of the microgrid's costs. 129

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DOEE's Comments at 10.
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DOEE's Comments at 12.

DOEE's Reply Comments at 12.

EEI's Comments at 3.

Pepco's Comments at 29.

Pepco's Reply Comments at 28.

DCCUB/Sierra Club/Grid2.0 Reply. DCCUB/Sierra Club/Grid2.0 concur with DOEE when it states that "'a strategic, phased plan' for evolving an integrated Grid could maximize cost-effective use of Distributed Energy Resources (DER) and Microgrids for the 'the benefit of the Grid and District of Columbia residents and businesses.",130 The DCCUB/Sierra Club/Grid2.0 list an array of potential action items that grid modernization should take into consideration to support microgrids: 1) a "[s]tandard language and common information model [should be created] to enable DER/Microgrid Interoperability;" 2) microgrids controllers should be leveraged to advance grid support capabilities; 3) microgrids should be able to integrate with utility energy management systems; ¹³¹ and 4) the grid modernization framework should include "verifiable methods for valuing the net benefits of DER and Microgrids" and "seek to maximize the benefits and minimize the costs of DER and Microgrids." 132 DCCUB/Sierra Club/Grid2.0 lastly states that the grid modernization framework should be able to "achieve functional/attribute control of DER/Microgrids [] for real-time balancing and flexibility and services such as frequency, voltage and reactive power control at the Distribution-level" among other things and "address the changing characteristic of new resources" including microgrids. 133

iii. Commission Decision

60. The Commission adopts Staff's proposed recommendation and opens a new docket to address development of microgrids in the District, as discussed in paragraph 96 of Order No. 19984. The Commission reiterates that it "has the authority to regulate microgrids if we determined they are acting within the definition of a public utility." The Commission also agrees with Staff's statement that, with respect to the regulations of microgrids, the Commission should "initiate a proceeding to address the microgrid recommendations" after the legal questions were resolved in a pending case, Formal Case No. 1153, which dealt with the planned microgrid facility at the Parks at Walter Reed. While the parties in Formal Case No. 1153 settled, the settlement left important questions unanswered as it relates to the regulatory framework of microgrids and its benefits and costs, as discussed by the Microgrid Working Group. Therefore, to better understand the benefits, or potential impacts, that microgrids bring

DCCUB/Sierra Club/Grid2.0's Reply Comments at 2.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 4.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 6.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 7.

¹³⁴ Order No. 19984, ¶¶ 95-96.

¹³⁵ Order No, 19984, ¶ 96.

Formal Case No. 1153, In the Matter of the Potomac Electric Power Company's Petition for an Investigation into the Status of Walter Reed's Electric Distribution System, Potomac Electric Power Company's Notice of Withdrawal of Petition, Settlement Agreement and Motion, filed September 5, 2019. See Order No. 20219, rel. September 12, 2019.

to the customers they serve or the distribution system as a whole and the appropriate regulatory framework for microgrids, the Commission opens a new docket, to further investigate microgrid ownership and operation structures, business models and value propositions, benefits and costs of microgrids, the different microgrid variances which lead to appropriate microgrid classifications and regulatory treatments.¹³⁷

F. Pilot Projects Governance Board

i. Staff Order Recommendation

- 61. As a condition of the PHI-Exelon Merger, a MEDSIS Pilot Project Fund of \$21.55 million was created to fund grid modernization projects to benefit District ratepayers. The Pilot Projects Working Group ("PPWG") was formed to finalize the proposed funding parameters laid out in Section VII of the MEDSIS Staff Report, ¹³⁸ including Pilot Project governance and management structure and project selection criteria so that the Commission could immediately begin the process of selecting appropriate projects using an open, transparent, and fair process.
- 62. Staff Order recommends that the Commission: (1) approve exclusion criteria 1 and 3 contained in Recommendation 5.6.1 of the Final Working Group Report; (2) direct that unproven technologies be excluded from funding consideration and the use of the U.S. Department of Energy ("DOE") technology readiness model as an appropriate screening measure to rank proposed technologies; (3) direct the use and appropriate modification of the TRL Questionnaire developed by Pacific Northwest National Laboratory ("PNNL") for DOE in PNNL's 2012 "Development of Technology Readiness Level (TRL) Metrics and Risk Measures" report; 139 (4) direct the Pilot Projects Governance Board to consider the appropriate TRL cut-off and risk mitigation designation and to incorporate the agreed upon Technology Readiness Level in the Call for Papers and the risk mitigation requirement in the RFPs; (5) initiate the MEDSIS Pilot Projects Phase in the Proposed Order; (6) approve the two-step screening process, including the adoption of the Pilot Project Screening and Scoring Template provided at Appendix A.8 of the Final WG Report, with the three modifications discussed in paragraphs 104-106 of the Order No. 19984; (7) adopt the amended grant funding parameters; and (8) grant the Board authority to modify the screening and scoring criteria with a majority vote. The Staff proposed to direct the Pilot Projects Governance Board to incorporate project monitoring, reporting, evaluation, and equity and inclusion parameters into the screening and scoring template provided at Appendix A.8 of the Proposed Order.

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Formal Case No. 11xx, In the Matter of the Investigation into the Regulatory Framework of Microgrids in the District of Columbia.

Formal Case No. 1130, Modernizing the Energy Delivery System for Increased Sustainability Staff Report, at 90-98, filed January 25, 2017.

Pacific Northwest National Laboratory, "Development of Technology Readiness Level (TRL) Metrics and Risk Measures," submitted to the U.S. Department of Energy in October 2012.

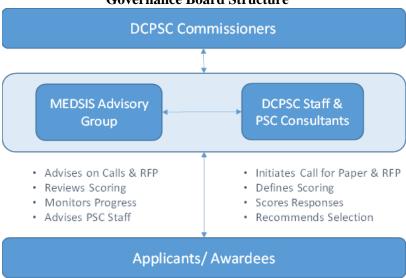


Figure 3: Final Working Group Report Proposed Governance Board Structure 140

- · Submits Pilot Concepts & Proposals for Projects
- · Provides Project Reporting
- Adheres to Project Milestones and Budget
- 63. Staff also recommends the adoption of the proposed Pilot Project Governance Model with the following modifications: (1) the Governance Board shall at a minimum include Commission Staff, OPC, DOEE, Pepco, WGL, and DCCUB as standing members; (2) Pepco and WGL shall be non-voting (*ex officio*) members of the Pilot Projects Governance Board, not consultants; and (3) all other Governance Board members shall be organizational representatives, selected by the standing board members. Staff also recommended that the Commission direct Staff to convene the first meeting of the Pilot Projects Governance Board within 30 days of the date of the Proposed Order, with their first order of business, developing an application to fill the remaining Board seats, described in paragraph 110 of Order No. 19984.
 - ii. Stakeholder Comments to Staff Proposed Decision
- 64. **Pepco Initial and Reply Comments.** Pepco stated its support for all of the proposed recommendations establishing and implementing a process for funding Pilot Projects using PowerPath DC funds. Pepco agrees with OPC's recommendations regarding the composition of the Pilot Projects Governance Board and will not seek to participate on the Board as either a voting or non-voting member. Similarly, Pepco takes the position that if DOEE puts forward two studies for

Reference to "MEDSIS Advisory Group" in Figure 3 should be read to mean "Pilot Project Governance Board."

Pepco's Comments at 30.

Pepco's Reply Comments at 29.

consideration for PowerPath DC Pilot funding, as it suggests, DOEE and its contractors (such as DCSEU) should be restricted from PowerPath DC Pilot Governance Board participation. Finally, Pepco clarifies that it will not seek to divert PowerPath DC Pilot Funds from actionable pilot projects in order to fund the BCA handbook it intends to prepare, for use when considering NWA projects. 144

- 65. **OPC.** OPC supports the creation of the Board but asserts that Pepco and WGL should not have seats on the Board because of potential conflicts of interest and the possibility of access to data which could present them with a competitive advantage. 145
- 66. **WGL.** WGL expresses support for the proposed directive that Pepco and WGL serve as non-voting members of the Pilot Projects Governance Board and also supports the recommendation that the Board should include a conflict of interest statement in the Roles and Requirements for Board members. ¹⁴⁶
- 67. **DOEE Reply.** DOEE recommends that pilot projects procured under an NWA framework not be exempt from the proposed NWA procurement process. ¹⁴⁷ Nevertheless, DOEE states that until that process becomes established, "DOEE can support limited projects as a partner, designed to demonstrate technical functionalities and market solutions, outside the NWA procurement process." ¹⁴⁸

iii. Commission Decision

68. The Commission appreciates stakeholders' comments on the Pilot Project Governance Board structure. The Governance Board, as proposed by Staff, does not fully account for the Commission's recent establishment of an Energy Efficiency and Energy Conservation Task Force, as "most efficient and viable option for structuring stakeholder involvement" in Order No. 20236 in *Formal Case No. 1148*. The Commission, therefore, establishes the Pilot Project Governance Board in line with the *Formal Case No. 1148* Task Force. The Commission rejects Staff's proposal for establishing standing members in paragraphs 109-110 of the Staff Order. First, the Commission agrees with Pepco and OPC that neither Pepco nor WGL should

Pepco's Reply Comments at 29.

Pepco's Reply Comments at 30.

OPC's Comments at 4.

WGL's Comments at 7-8.

DOEE's Reply Comments at 3.

DOEE's Reply Comments at 3.

See Formal Case No. 1148, Order No. 20236, ¶7, rel. October 11, 2019. See also, Formal Case No. 1148, Energy Efficiency Working Group Request (Corrected Version), ¶ 11, filed June 27, 2019. ("Because the Task Force would not be a formal entity, it could not issue an RFP for the Retrofit Program Implementer").

participate on the Board as either a voting or non-voting member, however, if the Board requires their input, the Commission expects the utilities to be responsive. Further, we are cognizant of the potential conflict of interest that could be presented for board members who also want to submit pilot projects for consideration for funding. Therefore, to avoid any potential conflicts of interests, we direct interested stakeholders who will not respond to solicitations and seek MEDSIS Pilot Project funding to file a request to be appointed to the Governance Board within 14 days of the date of this Order describing their involvement and interest in energy and grid modernization efforts in the District. The Commission in selecting members, the Governance Board, to the extent possible, will seek to establish a balance between government entities, energy system stakeholders, and community organizations, with at least one member being a community representative, such as an ANC commissioner.

The Commission has reviewed Staff's recommended decisions regarding 69. the pilot project process in accordance with paragraphs 97-110 of Order No. 19984 and responsive comments. The Commission approves and adopts the proposed decisions regarding the Pilot Exclusion Criteria to the Pilot Project Selection Process detailed in paragraphs 98 to 102, including supporting charts and tables; the Implementation of a Pilot Project Selection Process with Two Step Screening as detailed in paragraphs 103 to 106; the Grant Funding Qualification Parameters for Pilot Projects as detailed in paragraph 107; the Implementation of a Pilot Projects Governance Model as detailed in paragraph 108 of Staff's Order and modified above and further revised by paragraph 68 of this Order, and direct Commission Staff to convene the first meeting of the Pilot Projects Governance Board within 30 days of the date of this Order. After member selection is finalized, the Commission directs the Governance Board to develop and submit to the Commission, within 30 days of the first full Pilot Projects Governance Board meeting, an appropriate timeline to expeditiously move through the Pilot Project Selection process as approved in this Order. The Commission directs that the: (1) Pilot Projects Governance Board be formed; (2) the members be selected; (3) consultant or contract administrator be selected, which requires an RFP process to be completed by Commission Staff; (4) Call for Papers developed and submitted by the Board to the Commission for issuance; (5) Call for Papers responses submitted and ranked by the Board; (6) RFPs developed by the Board submitted to Commission for issuance; (7) responses to the RFPs reviewed and ranked by the Commission; and (8) the Commission issue orders on project selection and be responsible awarding project (s) funds.

G. Studies

i. Staff Order Recommendation

70. Staff's Order recommended that the Commission defer its decision on the recommendation that MEDSIS funds be used to fund a Value of DER and a Value of the Grid Study Analysis. Instead it was recommended that funding for these studies should be subject to award under the Pilot Project Phase, where MEDSIS Funds could be competitively awarded. Staff also recommended, with respect to a Benefit-Cost Analysis ("BCA"), in Recommendation 5.1.2 of the Final Working Group Report, that the Commission continue to use its long-standing "All Ratepayers Test" and a "Societal Cost Test," updated to incorporate economic and environmental factors as directed by the CleanEnergy DC Act, when a new utility program requiring a BCA is proposed. Staff recommended that, in lieu of developing another industry BCA whitepaper, the Commission continue to use such established tests as well as consider more flexible frameworks, such as the application of the MEDSIS Vision Statement and Guiding Principles to review qualitative factors in addition to quantitative analysis presented in a BCA analysis. 150 Staff also proposed that the proponents of these studies could submit a proposal during the Pilot Project process. Lastly, concerning the development of a carbon footprint metric, in Recommendation 5.1.1, Staff proposed that the Commission recognizes that DOEE is the executive agency designated to track greenhouse gas emissions and the District's progress in meeting its carbon neutral goal in 2050 is better positioned to lead the development of a carbon footprint metric for the District. Staff further recommended working jointly with DOEE to determine any economic impact on ratepayers and "should funding be a concern, then DOEE and other stakeholders are welcome to submit a proposal for the development of a carbon footprint metric utilizing MEDSIS funding during the pilot project phase." ¹⁵¹

ii. Stakeholder Comments to Staff Order

71. **Pepco.** Pepco supports the proposed directive that would require use of the established BCA methodologies, such as the one Pepco submitted in *Formal Case No.* 1086¹⁵² for its Demand Response Program. In addition, Pepco is reviewing the BCA handbooks submitted by utilities in connection with NWAs under the New York Reforming Energy Vision ("NY REV") program to glean insights that might extend this established approach with tested and approved methodologies. Pepco notes that

Formal Case No. 1130, Order No. 19984, ¶ 13.

¹⁵¹ Formal Case No. 1130, Order No. 19984, ¶ 10.

Formal Case No. 1086, In the Matter of the Investigation into the Potomac Electric Power Company's Residential Air Conditioner Direct Load Control Program.

Pepco's Comments at 8, 19.

Pepco's Comments at 8, 19.

DOEE states its intention to solicit PowerPath DC Pilot Funds to undertake a DER valuation study. Pepco provides a number of reasons for opposing this:

- a. First, valuation studies are highly subjective. In support, Pepco identifies a Daymark valuation study done for the Maryland Public Service Commission that places a value on solar that is ten-times the valuation reached in a Navigant study done for Northwestern Energy's Montana territory. 155
- b. Second, a valuation study is more likely to produce contentious Commission proceedings than the adoption of DERs. 156
- c. Third, valuation studies are costly and, as of yet, have not been actionable. 157
- d. Fourth, Pepco notes the Commission's September 26, 2019, Notice of Inquiry ("NOI") on analytical approaches that should be taken when considering the effects of a utility proposal on global climate change is already seeking input from the public regarding the metrics and analytics the Commission should apply to utility proposals to meet the District's environmental goals. Pepco contends that the NOI presents a far more collaborative, transparent and economic vehicle for achieving the same goal as DOEE's proposed DER valuation study. December 26, 2019, Notice of Inquiry ("NOI") analytical approaches that should be taken when considering the metrics and analytics the Commission should apply to utility proposals to meet the District's environmental goals. December 26, 2019, Notice of Inquiry ("NOI") on analytical approaches that should be taken when considering the effects of a utility proposal on global climate change is already seeking input from the public regarding the metrics and analytics the Commission should apply to utility proposals to meet the District's environmental goals. The Pepco contends that the NOI presents a far more collaborative, transparent and economic vehicle for achieving the same goal as DOEE's proposed DER valuation study.
- 72. **EEI.** When it comes to the DER Study, EEI notes that it agrees with Staff that "money spent on such a study would come from remaining available MEDSIS funds, and that the decision to pursue such a study should rightly be weighed against all other pilot projects to ensure that MEDSIS funding goes toward the most actionable, valuable projects" therefore EEI concurs with Commission Staff's statement that they "do not view the development of yet another industry white paper...as a fruitful endeavor at this time." ¹⁶⁰
- 73. **DCCUB/Sierra Club/Grid2.0 Reply.** On October 1, 2019, DCCUB/Sierra Club/Grid2.0 jointly filed Reply Comments addressing the need to integrate into the grid "increasingly higher levels of DER to meet the District's policy objectives" . . . "while sustaining high levels of electric quality and reliability." ¹⁶¹

Pepco's Reply Comments at 23.

Pepco's Reply Comments at 23.

Pepco's Reply Comments at 23-24.

Formal Case No. GD2019-04-M, In the Matter of the Implementation of the 2019 Clean Energy DC Omnibus Act Compliance Requirements, Notice of Inquiry, rel. September 26, 2019 ("Clean Energy NOI").

Pepco's Reply Comments at 23-24, 30.

EEI's Comments at 2-3.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 2.

DCCUB/Sierra Club/Grid2.0 also notes that "[to] integrate DER, a utility distribution system will need to change in fundamental ways to address both the challenges and the opportunities of DER, including contending with two-way flows of power and information, addressing the impacts on the grid of DER that have technical characteristics, such as variability and intermittency, that are quite different from central power sources, and developing new methods for data analysis, resource valuation, modelling and forecasting." ¹⁶² Essentially, because moving to an integrated grid will alter the system tremendously, DCCUB/Sierra Club/Grid2.0 states that it is important to "Integrated Distribution System Planning include and New Methods - including modern Benefits-Cost Analysis, grid system needs assessments, locational net benefit analysis, hosting capacity, for integrating distributed energy resources into grid planning and operational processes." 163

- 74. DCCUB/Sierra Club/Grid2.0 also assert that "[a] robust BCA is a powerful tool for evaluating potential grid modernization proposals in a non-prejudicial manner[,] [and notes that] [m]any stakeholders in the MEDSIS proceedings would expect the MEDSIS principles to govern the factors in such a DC-specific BCA." DCCUB/Sierra Club/Grid2.0 also expresses concern that "Pepco is one of the participants in the grid modernization effort, [because] it is clearly prejudicial for Pepco to retain exclusive control over BCA design." DCCUB/Sierra Club/Grid2.0 recommends that "[a] modern BCA for the District [] be a well-defined independent community document that can be used by any potential market-participant and its input and assumptions must be auditable by all interested stakeholders." 166
- 75. **DOEE.** DOEE states that it "looks forward to collaborating with the Commission to develop a carbon footprint metric and welcomes the opportunity to submit a carbon footprint proposal to the Commission for MEDSIS funding during the pilot project phase." DOEE also asserts that it "does not agree with the characterization of Benefit Cost Analysis (BCA) methodology as "an unsettled matter" in infrastructure investments in the energy sector" and that implementing a carbon metric "will require some form of a BCA methodology to assess the cost of carbon across all energy investments in a standardized manner." Additionally, DOEE states that it "will plan to submit one proposal which covers a study outlining a carbon footprint metric and cost benefit-cost analysis, as these topics are inter-related, and a

DCCUB/Sierra Club/Grid2.0's Reply Comments at 2.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 4.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 11.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 11.

DCCUB/Sierra Club/Grid2.0's Reply Comments at 11-12.

DOEE's Initial Comments at 5.

DOEE's Initial Comments at 5-6.

second proposal covering the locational value of DER" because "[b]oth studies will be critical tools for determining the strategy for energy infrastructure investments." ¹⁶⁹

- 76. **Pepco Reply.** Pepco asserts that although it agrees with DOEE's comment that a BCA is a widely used tool and recognizes that the Commission-tested and approved BCA methodology in Formal Case No. 1086 assigns value to environmental benefits, Pepco does not agree with DOEE's suggestion that the development of a carbon metric requires a BCA study. 170 Pepco asserts that undertaking a BCA methodology study is likely to be contested and will delay the implementation of the proposed DSP/NWA process and the issuance of NWA RFPs. 171 This delay would, in turn, result in a reduction in the number of NWA opportunities in 2021 and could even limit opportunities in 2022 or 2023, depending on the amount of time taken to settle on a new BCA methodology. 172 Moreover, Pepco asserts that outside of a pilot construct, Pepco is not aware of any purely distribution system NWA that has passed a BCA screen in the jurisdictions cited in the DC SUN Comments. 173 However, Pepco's review of handbooks released by utilities in connection with the NY REV process will include an evaluation of the existing All Ratepayers Test and Societal Cost Test. 174
- 77. Finally, Pepco reiterates that on September 26, 2019, the Commission initiated a Notice of Inquiry ("NOI") on Analytical Approaches that should be taken when considering the effects of a utility proposal on global climate change. This NOI includes questioning whether specific greenhouse gas emissions reporting requirements, metrics for reductions in such emissions and carbon footprint metrics should be used. Pepco states that this NOI will allow for a robust consideration of the best metrics, BCA methodologies and other analytics to apply to ensure that the Commission's consideration of regulated utility proposals is aligned with the CleanEnergy DC Act. 176
- 78. **DOEE Reply.** DOEE voices its appreciation for Pepco recommending carbon footprint resources. However, DOEE goes on to clarify "that a carbon footprint metric is intended to assess the relative carbon intensity of any energy investment in a standardized manner and is not intended as a tool for Distributed Energy Resources

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DOEE's Initial Comments at 5-6.
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Pepco's Reply Comments at 11.

Pepco's Reply Comments at 12.

Pepco's Reply Comments at 12.

Pepco's Reply Comments at 12.

Pepco's Reply Comments at 12-13.

¹⁷⁵ Clean Energy NOI.

Pepco's Reply Comments at 13.

DER only."¹⁷⁷ In reply to Pepco's desire to maintain existing BCA methodologies, DOEE notes that existing BCA methodologies have not resulted in the construction of any NWA projects and concludes, therefore, "a new BCA framework will be required that appropriately values NWA."¹⁷⁸ In this regard, DOEE "looks forward to providing additional comments to the Commission on the development of a new BCA framework" in the context of the NOI released by the Commission in *GD2019-04-M*.¹⁷⁹

iii. Commission Decision

- 79. The Commission has reviewed the responsive Comments submitted regarding the various studies discussed in the Staff Order. While we appreciate the concerns raised by Pepco and EEI, the Commission ultimately agrees with DCCUB/Sierra Club/Grid2.0, DC SUN, and DOEE that the various studies are needed to properly inform decision making about the operation and development of the energy distribution systems in the District. Further, the Commission recognizes that these studies are needed to aid in the further development and implementation of a comprehensive distribution system planning process. Thus, the Commission believes solicitation of the studies should be considered within the pilot project process. Therefore, the Commission directs the Pilot Projects Governance Board to review Appendix C¹⁸⁰ of Order No. 19984 to consider, prepare and submit requests for proposals ("RFP") to solicit consultants to perform necessary studies, within 120 days of the date of the Board's first meeting.
- 80. The Commission acknowledges that these studies will take time to produce but concludes that it will be important to the District's grid modernization efforts. The Commission will review the Pilot Projects Governance Board's RFPs, issue the RFPs and score responses for the selection of consultants to perform the studies. The Commission will also award funding for approved studies from the Formal Case No. 1130 MEDSIS Pilot Project Fund Subaccount.

DOEE's Reply Comments at 5.

DOEE's Reply Comments at 6.

DOEE's Reply Comments at 6, referencing. *GD2019-04-04-M*, *In the Matter of the Implementation of the 2019 Clean Energy DC Omnibus Act Compliance Requirements*, Notice of Inquiry, rel. September 26, 2019 ("Clean Energy NOI").

Appendix C of Order No. 19984 is a Non-Exhaustive List of Pilot Project Concepts and Goals created and discussed by the MEDSIS Working Group. Other appropriate studies could include Baseline Distribution System Assessment, Hosting Capacity Analysis, Locational Net Benefit Analysis of DER Integration, and Benefit Cost Methodology.

H. Publish a Rulemaking Proposing Definitions for "Advanced Inverters" and "Non-Wires Alternative"

- i. Working Group Recommendation and Staff Order Recommendation
- 81. The NWAWG during their meetings discussed the purpose and goals around NWAs in the District and made recommendations on the process, tools, and information requirements needed to evaluate NWAs to conventional grid infrastructure investments for meeting system needs. An objective of this group included identifying when, where, and how in the DSP process the utility and third-party providers can propose NWAs and the risks and compensations for NWAs. The NWAWG among other recommendations, advised that the Commission establish an NWA¹⁸¹ and an advanced inverters definition that are based on existing published industry definitions and stakeholder input. Given the vast support of definitions by stakeholders, the Staff Order recommended that these definitions be included in a proposed NOPR and directed Commission Staff to issue and finalize the definitions within 180 days from the date of the Staff Order.

ii. Commission Decision

82. The Commission believes that in order to facilitate and support the DSP process and given the extensive collaboration of stakeholders to develop the NWA and advanced inverters definitions, the issuance of a NOPR to address NWAs and advanced inverters is warranted and necessary. Therefore, the Commission directs Commission Staff to finalize and issue Notice of Proposed Rulemaking for the definitions of NWA and advanced inverters, referenced in Attachment B of this Order within 60 days of the date of this Order.

V. CONCLUSION

- 83. The Commission affirms its commitment to address the District's mandate for a clean energy future by ensuring that the utilities we regulate act in accordance with the District's energy and climate change commitments that facilitate a reduction in the District's GHG emissions by 50% below 2006 levels by 2032, achieve carbon neutrality by 2050, reduce energy use by 50% by 2032, and increase the use of renewable energy to 100% of the supply by 2032.
- 84. This Order outlines the initial steps to achieve the Power Path DC vision with a strategic framework that includes distribution system planning, creation of a secure web portal, creation of a customer microsite for energy service providers, rate

Final WG Report at 102.

Final WG Report at 85.

Order No. 19984, ¶¶ 40, 51.

design, the establishment of a microgrid proceeding, formation of the Pilot Project Governance Board, and modernization study pilot projects.

THEREFORE, IT IS ORDERED THAT:

- 85. The Potomac Electric Power Company is **DIRECTED** to submit a revised Distribution System Planning process implementation timeframe in accordance with paragraph 38, within 30 days of the date of this Order;
- 86. The Potomac Electric Power Company and Washington Gas Light Company are **DIRECTED** to create a secure web portal for data sharing of information in accordance with paragraph 40, within 120 days of the date of this Order;
- 87. The Commission **APPROVES** the recommendation in the Final Working Group Report but establishes the Rate Design Working Group to propose best practice rate design solutions including a new residential Dynamic Pricing program(s) in accordance with paragraph 53; Pepco is to submit a strawman proposal for consideration by the Rate Design Working Group within 90 days of the date of this Order;
- 88. The Commission **DIRECTS** stakeholders interested in becoming members of the Rate Design Working Group to notify the Commission Secretary within 14 days from the date of this Order and **DIRECTS** Commission Staff to convene the working group by notice in accordance with paragraph 53, within 60 days of the date of this Order;
- 89. The Commission **DIRECTS** the Potomac Electric Power Company to prepare and file with the Commission a pilot residential time-of-use pilot rate proposal in accordance with paragraph 54 within 45 days of the date of this Order;
- 90. The Commission **DIRECTS** Commission Staff to open a new Microgrids docket, Formal Case No. 11xx, In the Matter of the Investigation into the Regulatory Framework of Microgrids in the District of Columbia;
- 91. The Commission **DIRECTS** Commission Staff to establish the Pilot Project Governance Board in line with the *Formal Case No. 1148* Task Force and convene the first meeting of the Pilot Projects Governance Board in accordance with paragraphs 68-69 within 30 days of the date of this Order;
- 92. The Commission **DIRECTS** that proposals by independent consultants to perform studies be addressed and reviewed in the Pilot Project process, in accordance with paragraphs 79-80 of this Order; and
- 93. The Commission **DIRECTS** Commission Staff to finalize and issue a Notice of Proposed Rulemaking for NWA and advanced inverters definitions reference in Attachment B of this Order within 60 days of the date of this Order.

A TRUE COPY: BY DIRECTION OF THE COMMISSION:

CHIEF CLERK:

BRINDA WESTBROOK-SEDGWICK

COMMISSION SECRETARY

	ATTACHMENT A: DIRECTIVES IMPLEMENTATION TIME FRAME						
	Directive	Decisional Paragraph	Ordering Paragraph				
ays	Convene the Pilot Projects Governance Board	68-69	91	Commission Staff			
30 Days	File a revised DSP Implementation Plan	38	85	PEPCO			
		-					
45 Days	Prepare and file a Time-of-Use Rate Pilot Proposal to the Commission.	54	89	PEPCO			
60 Days	Reconvene Rate Design Working Group by Notice	53	88	Commission Staff			
	Finalize and Issue NWA and Advanced Inverters Notice of Proposed Rulemaking (Attachment B)	82	93	Commission Staff			
120 Days	File report on the status of implementing the secure web portal	40	86	PEPCO/WGL			

ATTACHMENT B: DRAFT NOTICE OF PROPOSED RULEMAKING

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

PROPOSED NOTICE OF PROPOSED RULEMAKING

FORMAL CASE NO. 1130, IN THE MATTER OF THE INVESTIGATION INTO MODERNIZING THE ENERGY DELIVERY SYSTEM FOR INCREASED SUSTAINABILITY;

RM-09-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 9- NET ENERGY METERING;

RM-13-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 13 — RULES IMPLEMENTING THE PUBLIC UTILITIES REIMBURSEMENT FEE ACT OF 1980;

RM-29-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 29 — RENEWABLE ENERGY PORTFOLIO STANDARD;

RM-36-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 36 — ELECTRICITY QUALITY OF SERVICE STANDARDS;

RM-40-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 40 — DISTRICT OF COLUMBIA SMALL GENERATOR INTERCONNECTION RULES;

RM-41-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 41 — THE DISTRICT OF COLUMBIA STANDARD OFFER SERVICE RULES;

RM-42-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 42 — FUEL MIX AND EMISSIONS DISCLOSURE REPORTS; AND

RM-44-2017-01, IN THE MATTER OF 15 DCMR CHAPTER 44 — SUBMETERING AND ENERGY ALLOCATION.

1. The Public Service Commission of the District of Columbia ("Commission") hereby gives notice, pursuant to Section 34-802 of the District of Columbia Code ("D.C. Code") and in accordance with Section 2-505 of the D.C. Code, ¹⁸⁴ of its intent to amend the following provisions of Title 15 (Public Utilities and Cable Television) of the District of Columbia Municipal Regulations ("DCMR"): Chapter 9, "Net Energy Metering;" Chapter 13, "Rule Implementing the Public Utilities Reimbursement Fee Act of 1980;" Chapter 29, "Renewable Energy Portfolio Standard;" Chapter 36, "Electric Quality of Service Standards;" Chapter 40, "District of Columbia Small Generator Interconnection Rules;" Chapter 41, "The District of Columbia Standard Offer Service Rules;" Chapter 42, "Fuel Mix and Emissions Disclosure Reports;" and Chapter 44, "Submetering and Energy Allocation." All persons interested in

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D.C. Code § 34-802 (2001); D.C. Code § 2-505 (2001).

commenting on the content of this Notice are invited to submit written comments no later than thirty (30) days after the publication in the *D.C. Register*.

2. On May 31, 2019, the MEDSIS Working Group submitted to the Commission its Final Report containing 32 recommendations and learnings. In response to two of such recommendations, the Commission is proposing to define the terms "Advanced inverters" and "Non-wires alternative" in the manners shown below.

In Section 999 of Chapter 9, Section 1399.1 of Chapter 13, Section 2999.1 of Chapter 29, Section 3699.1 of Chapter 36, Section 4099.1 of Chapter 40, Section 4199.1 of Chapter 41, Section 4299.1 of Chapter 42, and Section 4499.1 of Chapter 44, the definitions for "Advanced inverter" and "Non-wires alternative" are added as follows:

"Advanced inverters" means inverters with a digital architecture, bidirectional communications, and software that enables functionalities providing autonomous grid support and enhance system reliability, along with the capability to adjust their operational set points in response to the changing characteristics of the grid through dedicated communications protocols and standards. Advanced inverters must enable, at the minimum, the following functionalities, as defined in IEEE Standard 1547-2018: dynamic and real power support, voltage ride-through, frequency ride-through, voltage support, frequency support, and ramp rates."

"Non-wires alternative (NWA)" means any action or strategy in the energy delivery system domain that uses non-traditional transmission and/or distribution solutions--such as distributed generation, energy storage, energy efficiency, demand response, and grid software and controls--with the intent to defer or replace the need for specific energy delivery system equipment investments. An NWA must meet energy delivery system needs and be more cost-effective than traditional transmission and/or distribution solutions, consistent with the guiding principles of MEDSIS. An NWA must be sustainable, prudently-planned, secure, affordable, and non-discriminatory."

3. Any person interested may submit written comments on this proposed rulemaking, not later than 30 days after publication of this Notice in the *D.C. Register*, addressed to Brinda Westbrook-Sedgwick, Commission Secretary, Public Service Commission of the District of Columbia, 1325 G Street, N.W., Suite 800, Washington, D.C. 20005 or electronically on the Commission's website at https://edocket.dcpsc.org/public/public_comments. Copies of the proposed rules may be obtained by visiting the Commission's website at www.dcpsc.org or at cost, by contacting the Commission Secretary at the address provided above. Persons with questions concerning this NOPR should call (202) 626-5150 or send an email to psc-commissionsecretary@dc.gov.

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Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability ("Formal Case No. 1130"), Final Report v1.0 of the DCPSC MEDSIS Stakeholder Working Groups, filed May 31, 2019.

FORMAL CASE NO. 1130, IN THE MATTER OF THE INVESTIGATION INTO MODERNIZING THE ENERGY DELIVERY SYSTEM FOR INCREASED SUSTAINABILITY, Order No. 20286

STATEMENT OF COMMISSIONER RICHARD BEVERLY

I am happy that we were able to reach a consensus that moves Power Path DC forward and I appreciate the hard work of the stakeholders that helped us reach this milestone. However, as is the case with so many things, the devil is in the details. Although the Commission is an independent agency and is not bound by the plans of other District agencies, we are nevertheless part of a statutory scheme that expects us to ensure that we and the utilities we regulate act in accordance with the District's energy and climate change commitments to reduce the District's GHG emissions by 50% below 2006 levels by 2032, achieve carbon neutrality by 2050, reduce energy use by 100% by 2032, and increase the use of renewable energy to 50% of the supply by 2032.

The Commission established a Power Path DC guiding principle with the intent to ensure that the District's energy distribution and transmission systems are strong and robust enough to withstand low probability, high impact events like storms, floods, and physical and cyber threats. This requires the development of a detailed, data-driven distribution and integrated resource plans that, among other things, make infrastructure planning cost-effective; enable the optimal combination of DER with traditional capital investment by exploring non-wires alternatives; comply with legislatively mandated deployment of DER in the District; permit rational participation of consumers and distribution service providers; and, plan for, track, and monitor DER penetration rates on the grid. This order lays the foundation for advancing that principle but falls short of providing a detailed, data-driven distribution and integrated resource planning process that will enable the District to meet its targeted energy and climate goals.

This order does not specify the type of studies that should be undertaken to develop a distribution and integrated resource planning process that will enable the District to meet its targeted energy and climate goals. Four critical studies include:

Baseline Distribution System Assessment. Because the foundation for system planning starts with rigorous power flow analysis of the current system to fulfill obligations to provide safe, reliable service to customers at a reasonable cost, a baseline assessment of current feeder and substation reliability, condition of grid assets, asset loading and operations along with a comparative assessment of current operating conditions against prior forecasts of load and DER adoption will be needed.¹

Hosting Capacity Analysis. A DER integration study that identifies and quantifies the distribution system impacts attributed to interconnected DER is accomplished by conducting hosting capacity analysis ("HCA") studies that determine the level of DER interconnection that can be locally accommodated safely and reliably without requiring

Integrated Distribution Planning Report, August 2016 (ICF Report).

infrastructure upgrades without impacting the quality of supply for the existing infrastructure. Hosting capacity methods quantify the engineering factors that increasing DER penetration introduced on the distribution system within three principal constraints: thermal, voltage/power quality and protection limits.² This study will need to consider the economic and environmental challenges and opportunities of DER integration and will require an assessment of the energy delivery system that identifies expected system constraints; determines resources availability; identifies mitigation alternatives; and, evaluates and selects alternatives.³ Additionally, HCA can be useful for considering how resilient DER like microgrids and resilient solar can be factored into an overall system planning strategy.⁴

Locational Net Benefit Analysis of DER Integration. While DER have the potential to provide incremental value for all customers through improving distribution system efficiency, the value of DER on the distribution system is locational in nature—that is, the value may be associated with a distribution substation, an individual feeder, a section of a feeder, or a combination of these components. This requires consideration of how optimized locational adoption of DERs could enhance the hosting capacity. Consequently, the Commission agrees with the Final WG Report recommendation and believes that achieving a more precise articulation of the full value of DER is essential as we move forward to determine available solutions for meeting load growth. Combining HCA data with local resilience vulnerability assessments and outage data enables the Commission to prioritize high-impact locations in the District for resilient DER.⁵

Benefit Cost Methodology. The Final WG Report recommends that the Commission develop a white paper on a benefit-cost analysis ("BCA") methodology framework that incorporates environmental and health benefits along with indirect costs of stranded assets that considers and evaluates different methodologies considering the MEDSIS Guiding Principles, as well as examine proceedings undertaken in other jurisdictions. The BCA methodology and framework could be integrated into any NWA consideration processes as they evolve.⁶

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Integrated Distribution Planning Report, August 2016 (ICF Report).

EPRI-Incorporating DER Into Distribution Planning, June 2018 at 3-10.

See Advancing Electric System Resilience with Distributed Energy Resources: A Review of State Policies, NARUC at 12-13, September 2019; NARUC defines resilience as "robustness and recovery characteristics of utility infrastructure and operations, which avoid or minimize interruptions of service during an extraordinary and hazardous event," See also The Value of Resilience for Distributed Energy Resources: An Overview of Current Analytical Practices, NARUC at 7, April 2019

Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability ("Formal Case No. 1130"), Final Report v1.0 of the DCPSC MEDSIS Stakeholder Working Groups at 124, filed May 31, 2019 ("Final WG Report"); see Advancing Electric System Resilience with Distributed Energy Resources: A Review of State Policies, NARUC at 12-13, September 2019.

Formal Case No. 1130, Final WG Report at 59.

A key essential to ensuring an effective way to leverage technology, encourage innovation, and achieve the District's targeted clean energy and climate goals is transparency. This will require an assessment of the physical and operational changes necessary for safe, reliable and affordable service that satisfies customers' changing expectations and use of DER. Ideally, these studies would identify:

- any necessary distribution investments to enhance safety, reliability and security, including replacement of aging infrastructure and grid modernization
- changes to interconnection processes and integration investments to support DER adoption
- the value of DER and opportunities to realize net benefits for all customers using DER-provided services⁷

I believe a more focused, transparent planning process beyond the current undertakings with the Productivity Improvement Working Group and the Annual Consolidated Report, by way of example, needs to be developed and implemented to support efforts under Power Path DC. To ensure the most efficient use of resources that are focused on integrated distribution planning that supports energy delivery system modernization, we need to determine what reports currently being filed by the utilities need to be continued, discontinued or added.

I suggest that we approach this critical area by first examining the current regulatory requirements that involve any aspect of distribution system planning to determine areas that should be considered for system planning by exploring the following:

- a. What specific areas of distribution system operations are included in distribution system planning? Does it include multiple scenario-based studies of distribution grid impacts to identify grid needs and a solutions assessment including potential operational changes to system configuration, needed infrastructure replacement, upgrades and modernization investments, and potential for non-wires alternatives?
- b. What role does SAIDI, SAIFI and CEMI play in distribution system planning?
- c. What analysis has been produced that assesses current feeder and substation reliability, condition of grid assets, asset loading and operations?
- d. What comparative analysis has been produced that assesses current operating conditions against load forecasts and DER adoption?
- e. What hosting capacity analysis has been produced to establish a baseline of the amount of DER the distribution system can accommodate safely and reliably without infrastructure upgrades?
- f. What multiple DER growth scenarios have been produced that assess current system capabilities, identify incremental infrastructure requirements and enable analysis of the locational value of DERs?

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⁷ See Schwartz, L. (2019). Planning for the Evolving Grid: State Distribution Planning Practices. Available at: http://www.ncsl.org/Portals/1/Documents/energy/webinar_LSchwartz_9_2017_31633.pdf.

- g. How would you describe the current annual distribution planning process?
- h. What changes to the District of Columbia's interconnection rules and processes to address a growing number and diversity of customer DER and distribution-connected DER interconnection requests should be evaluated?
- i. How does the current distribution planning process incorporate transmission planning? To the extent distribution connected DER provides wholesale energy services for PJM, how does the current distribution planning process consider the deliverability of DER across the distribution system to the wholesale transaction point?

After evaluating this information and the results of the studies described above, I suggest that we identify a distribution system planning process for examination and development and outline the distribution system planning framework vision by exploring:

- a. the need for grid connectivity models to accurately identify customers and DER on distribution feeders, including individual phases to improve outage management and DER integration
- b. the need for grid communications to support effective integration of higher levels of DER and net customer load⁸
- c. the uses and objectives for hosting capacity analyses (e.g., indicative information for heat maps, fast-track interconnection approvals, annual distribution system studies)
- d. the location granularity, frequency and accuracy requirements for each use in hosting capacity analyses
- e. an implementation roadmap for the systematic use of hosting capacity
- f. distribution scenario parameters for utility use in distribution system scenarios
- g. key assumptions and other scenario parameters that should be aligned among transmission planning and distribution planning
- h. the level of granularity required for distribution system scenarios
- i. the use of forecasted hosting capacity to inform needed distribution system upgrades to support adoption of DER
- j. how to account for longer-term traditional investment in the distribution system planning process to align with the opportunity to consider DER as an alternative and the associated time needed for development
- k. the applicability of DER to address shorter-term operational needs
- l. the appropriate level of transparency including relevant data sharing in the distribution system planning process and stakeholder engagement

⁸ Clean Energy DC recommends that opportunities to use the data collected by advanced metering infrastructure installed across the District to get a better understanding of where and how energy is being used be identified and pursued.

- m. the alignment of grid modernization investments linked to optimizing the value of DER adoption for all customer
- n. key assumptions regarding deliverability of DER into wholesale markets and transmission and related impacts on distribution
- o. the potential for certain DER to provide services as an NWA for transmission and distribution investment and potential issues with double-counting resource contributions
- p. the development of a DER locational benefits implementation roadmap that identifies which of the value components may be evaluated in the near-term and in the longer term that identifies specific gaps regarding the necessary prerequisites to value a component
- q. the identification of potential solutions to address any grid needs in the near-term (i.e., 1-3 years) and long-term plans (5-10+ years) that satisfy identified engineering needs and other key criteria, including cost-effectiveness and rate recovery considerations in two solutions categories: (1) operational changes and minor near-term capital investments and (2) major capital investments

I further believe we should also consider how a distribution and integrated resource planning process operates in conjunction with a multiyear regulation plan.

With the adoption of the Pilot Projects Governance Board, DOEE and other Board members can independently move forward with developing the appropriate pilot project selection criteria that not only advance the Power Path DC vision and principles, but also enable the District to meet its climate and energy targets. I recognize that this order does not iron out every thorny issue, but I remain ready to offer the Board guidance as necessary.