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January 2, 2018

Ms. Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission of the District of Columbia
1325 G Street, N.W.
Suite 800
Washington, D.C. 20005

Re: Formal Case No. 1130

Dear Ms. Westbrook-Sedgwick:

Enclosed please find the Initial Comments of Potomac Electric Power Company on the Notices of Proposed Rulemaking in the modernizing the energy delivery system for increased sustainability.

Please contact me if you have any further questions.

Sincerely,

Andrea H. Harper

Enclosure

cc: All Parties of Record

BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

IN THE MATTER OF THE	)	
INVESTIGATION IN MODERNIZING	)	**Formal Case No. 1130**
THE ENERGY DELIVERY SYSTEM	)	
FOR INCREASED SUSTAINABILITY	)	

INITIAL COMMENTS OF POTOMAC ELECTRIC POWER COMPANY ON THE NOTICES OF PROPOSED RULEMAKING IN MEDSIS

Pursuant to the timeline for comments adopted by the Public Service Commission of the District of Columbia (the "Commission") and published in the D.C. Register on November 3, 2017, Potomac Electric Power Company ("Pepco" or the "Company") files its initial comments ("Comments") on the in the Notices of Proposed Rulemaking issued in the modernizing the energy delivery system for increased sustainability ("MEDSIS") proceeding ("MEDSIS NOPRs"). Pepco has participated extensively throughout the MEDSIS proceeding, providing detailed information about its systems and operations in Commission workshops and presenting its views on the legal and regulatory frameworks necessary to support the expansion of distributed energy resources ("DERs"), microgrids, and other innovative energy technologies. Moreover, in accordance with commitments made in the Exelon-Pepco Holdings merger proceedings and in other ongoing Commission dockets,[1] Pepco is already engaged in a variety of actions to modernize its system and promote DER integration consistent with the MEDSIS proceeding. As demonstrated by these ongoing initiatives, Pepco strongly supports the

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[1] *See generally* Staff Report, Appendix B; *see also Formal Case No. 1119, In the Matter of the Joint Application of Exelon Corporation, Pepco Holdings, Inc., Potomac Electric Power Company, Exelon Energy Delivery Company, LLC and New Special Purpose Entity, LLC for Authorization and Approval of Proposed Merger Transaction ("Formal Case No. 1119")*, Order No. 18148 (Mar. 23, 2016) ("the Merger"). As the Staff Report explains, the Merger included a number of commitments that were designed to advance both the MEDSIS proceedings and DER generally. *See* Staff Report at B-7–B-9. The current status of the Merger commitments is available on the Commission's website (http://www.dcpsc.org/fc1119mergertrackingmatrix).

Commission's MEDSIS vision and is committed to working with all stakeholders to drive energy innovation in the District of Columbia and to increase the use of DER and other technologies to meet the energy expectations of customers. Modernizing the distribution system for increased sustainability will require continued innovation to deliver affordable, reliable, and resilient clean energy over an energy platform that connects users and simplifies access to sustainable DERs, enables a range of energy transactions, and provides a broad array of energy information, products and services that enable customers to manage and control their energy use. At the same time, these expanded capabilities must work in tandem with Pepco's basic obligation to ensure that all District customers have safe, reliable and affordable energy at the moment they need it. With the need to balance modernization with utility obligations in mind, Pepco provides the following comments on the MEDSIS NOPRs.

I. SPECIFIC COMMENTS ON THE MEDSIS NOPRS

Pepco generally agrees with the new and revised definitions proposed in the MEDSIS NOPRs. However, Pepco discusses several individual definitions where some revision is appropriate.

A. The Definition of Electric Storage

The feasibility of deploying energy storage in the District of Columbia was a key factor identified by the Commission in determining to initiate the MEDSIS proceeding,[2] and Pepco welcomes the recommendation to establish definitions to facilitate deployment. Energy storage can provide a wide range of distribution system and customer benefits, with decreasing energy storage system costs in the coming years allowing for greater application opportunities.

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[2] *Modernizing the Energy Delivery System for Increased Sustainability*, Formal Case No. 1130, MEDSIS Staff Report at 16 (Jan. 25, 2017).

As Pepco has discussed previously in this proceeding, Pepco believes that the Commission should revise the defined term "Electric Storage" to "Energy Storage." The changes that the MEDSIS NOPRs propose to this definition have provided for the inclusion of other types of stored energy and will better facilitate emerging technologies (*e.g.*, thermal energy storage, where electricity may be used in off-peak hours to produce ice that can later be used to reduce the electrical demand of cooling systems during peak hours). Thus, currently the defined term is more restrictive than the definition itself. The Commission should align the defined term and the definition as suggested below.

> "~~Electric~~ Energy storage" – A resource capable of absorbing electric energy, storing it for a period of time and thereafter dispatching the energy regardless of where the resource is located on the electric distribution system. These resources include all types of ~~electric~~ energy storage technologies, regardless of their size, storage medium (e.g., batteries, flywheels, electric vehicles, compressed air), or operational purpose. An energy storage resource may be owned by an electrical company and is not an electric generating facility, as defined in D.C. Code Section 34-205.

An essential underlying premise that must appear in any definition is that energy storage is not generation. Though it may be tempting to classify energy storage as generation, batteries are not, in fact, capable of generating energy. Rather, energy storage devices capture and absorb energy generated by another source, store that energy, and then deliver that energy as electricity at a future time, as reflected in the definition above. Pepco reemphasizes in these Comments the need for the Commission to make clear that energy storage is not generation.

In light of the significant benefits of storage deployment in conjunction with distribution system upgrades, Pepco is currently evaluating potential opportunities for energy storage investments to support distribution system operating needs and reliability performance. The Commission should make clear that the scope of energy storage services envisioned in the MEDSIS proceeding includes utility-owned storage in order to promote a more reliable and

resilient distribution system, overall system efficiency, and lower costs to customers. There are multiple energy storage applications that are particularly appropriate for direct integration with utility systems, including:

- **Use of energy storage in a substation or on a distribution feeder to enhance reliability and defer the need to increase capacity in that portion of the distribution system.** These applications have the opportunity to defer portions of the required investments for distribution system upgrades, while supporting the distribution utility meeting customer load requirements at all times.
- **Deployment of energy storage to facilitate increased use of intermittent DERs.** Energy storage can help manage and mitigate the impact on other customers from intermittent changes in voltage on the system as the PV generation increases, decreases, and suddenly varies the generation output onto the system due to sun conditions or other factors. While there are several approaches to voltage control on systems today, energy storage may be a particularly effective means of mitigating such variability and enabling added distributed generation on those portions of the grid.
- **Control of voltage on distribution feeders.** Some feeders can experience variations in voltage that may cause issues with customers' appliances and equipment. Energy storage may provide an option—for those feeders with limited options—or an addition option—for those feeders with multiple options—to help mitigate those variations to further improve reliability.

- **Support of transmission facilities in ways similar to distribution system support.** Energy storage can also address short-term volatility and congestion issues at the transmission level.

The Commission should be amenable to utility-owned energy storage with rate recovery, which has or could soon become a reality in other jurisdictions.[3] The Commission should also clarify that the deployment of energy storage technologies presents many of the same issues associated with grid integration of other DERs, such as locational optimization of system benefits. Therefore, decisions about battery placement and operations by customers (either in MEDSIS pilot projects or otherwise) must be closely coordinated with Pepco, and energy storage owners should be required to proceed through the interconnection process. Where energy storage is used for system reliability purposes, Pepco will require control of the batteries to ensure reliability, and utility ownership, in those circumstances, facilitates such control. Utility-owned energy storage resources should also be able to participate in energy markets (*e.g.*, by providing ancillary services) in a way that maximizes the value of the system and reduces total system cost for customers.

B. The Definition of Distributed Energy Resource

The proposed definition of distributed energy resource ("DER") replaces the word "resource" with "source" and "sink" terminology. The "source" and "sink" terminology is used

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[3] *See, e.g., Order on Distributed System Implementation Plan Filings*, New York Public Service Commission, Mar. 9, 2017, at pp. 29-30 (mandating utilities develop storage projects and emphasizing that utilities "should be striving to develop their abilities to plan and use energy storage as part of their normal course of business"); Order *Adopting A Clean Energy Standard*, New York Public Service Commission, Aug. 1, 2016, at p. 104 (allowing for utility ownership of energy storage); *State of Charge: Massachusetts Energy Storage Initiative*, Massachusetts Department of Energy Resources, Sept. 16, 2016 (recommending procurement for regulator-approved utility owned storage located at utility substations and included in rate base); Order, Public Utilities Commission of Texas, Control Number 35994, Item No. 114, Apr. 6, 2009 (approving installation by Electric Transmission Texas of 4.8 MW of NaS battery storage at the Presidio, Texas substation).

in PJM documents, but these are not terms that are used in the District's regulations and require additional definitions, with particular care paid to distinguishing different functions and capabilities in distribution and transmission contexts. The Commission has not included such definitions, instead introducing confusion and uncertainty to the definition of DER. To ensure clarity, Pepco proposes to revert to the use of the word "resource" as shown below:

> **"Distributed Energy Resource" or "DER"**: A resource ~~source or sink of power~~ sited close to the customer's load that can provide all or some of the customer's energy needs and can also be used by the system to either reduce demand (such as demand response) or increase supply to satisfy the energy, capacity, or ancillary service needs of the distribution or transmission system. The resources, if providing electricity or thermal energy, are small in scale, connected to the distribution system, and close to the load. Types of DER include, but are not limited to: photovoltaic solar, wind, cogeneration, energy storage, demand response, electric vehicles, microturbines, biomass, waste-to-energy~~,~~ generating facilities, and energy efficiency.

C. The Definition of Smart Inverter

The MEDSIS NOPRs includes a new definition for "Smart Inverter." As proposed, the definition is too restrictive for use without more context and clear application on Pepco's system. Specifically, "Smart Inverter" is limited to inverters that "perform power support operations that enhance grid reliability," but smart inverters (including those being deployed in Pepco's smart inverter pilot project in the District of Columbia) are a rapidly evolving technology with multiple functionalities, including remote power curtailment, voltage and frequency support at a customer's premise, remotely set trip limits, and visibility of actual solar generation. This definition should be removed from the MEDSIS NOPRs because it is likely to be addressed more effectively following pilot projects in which the associated technology and applications are actually deployed.

D. The Definition of Electric Generating Facility

The MEDSIS NOPRs include a new definition of Electric Generating Facility. As written, the definition appears to be too broad and appears to encompass electric distribution system assets. When read in conjunction with 15 D.C.M.R. § 2100.2 in the MEDSIS NOPRs, arguably the EDC could be required to wait until an Electric Generating Facility is approved to begin construction of "poles", for example, that are distribution assets and that Pepco would otherwise construct as part of the electric distribution system because those poles also would be "used by" the Electric Generating Facility seeking approval. Pepco requests that the Commission exclude from this definition facilities that are owned by the utility or are required for the distribution of electricity to ensure that Pepco is not hindered in its ability to construct distribution system assets in the normal course of business.

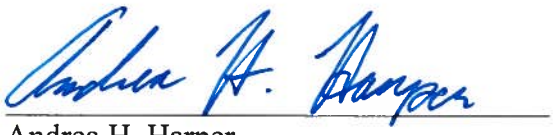
> **"Electric generating facility"** means all buildings, easements, real estate, mains, pipes, conduits, fixtures, meters, wires, poles, lamps, devices, and materials of any kind operated, owned, used, or to be used by a person ~~for~~ directly related to the generation of electricity. The term includes all buildings, easements, real estate, mains, pipes, conduits, fixtures, meters, wires, poles, lamps, devices, and materials of any kind operated, owned, used, or to be used by a person for cogeneration of electricity. Buildings, easements, real estate, mains, pipes, conduits, fixtures, meters, wires, poles, lamps, devices, and materials of any kind that are owned, or are required for the distribution of electricity, by the EDC are not included in this definition.

II. CONCLUSION

Pepco appreciates this opportunity to submit these Comments on the MEDSIS NOPRs and looks forward to continuing to work with the Commission and other stakeholders to achieve the goals of the MEDSIS proceeding.

Respectfully submitted,

POTOMAC ELECTRIC POWER COMPANY

By: 

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Washington, D.C.
January 2, 2018

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Initial Comments of Potomac Electric Power Company on the Notices of Proposed Rulemaking in the modernizing the energy delivery system for increased sustainability was served this January 2, 2018 on all parties in Formal Case No. 1130 by electronic mail.

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