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

#### **ORDER**

October 19, 2017

FORMAL CASE NO. 1130, IN THE MATTER OF THE INVESTIGATION INTO MODERNIZING THE ENERGY DELIVERY SYSTEM FOR INCREASED SUSTAINABILITY, Order No. 19143

#### I. INTRODUCTION

1. By this Order, the Public Service Commission of the District of Columbia ("Commission") invites the public to submit comment on Staff's Proposed Vision Statement for the modernizing the distribution energy delivery system for increased sustainability ("MEDSIS") Initiative or "MEDSIS Vision Statement." The Commission also invites public comment on whether any guiding principles should be included in the Commission's vision statement; whether a full assessment of the current capabilities and characteristics of the District's current energy delivery system is warranted at this time; and, whether, and to what extent, a consultant would be useful to help move MEDSIS forward more expeditiously. Initial comments on these matters as well as on the proposed MEDSIS Vision Statement are due within sixty (60) days of the date of this Order and reply comments are due thirty (30) days thereafter. The Commission also transfers the entire docket of *Formal Case No. 1143* to this proceeding. <sup>1</sup>

# II. <u>BACKGROUND</u>

2. The investigation into modernizing the energy delivery system in the District of Columbia was initiated in response to intervenors' requests in both *Formal Case No. 1103*<sup>2</sup> and *Formal Case No. 1123*.<sup>3</sup> In consideration of intervenor requests, technological advancements in the energy industry, and changing consumer preferences, on June 12, 2015, the Commission issued Order No. 17912 which opened this proceeding to identify technologies and policies that can be implemented in the District to modernize the distribution energy delivery system for increased

Formal Case No. 1143, In the Matter of the Commission's Consideration of a Demand Management Program for Electric Vehicle Charging in the District of Columbia ("Formal Case No. 1143"), Potomac Electric Power Company's ("Pepco") Proposal for a Limited Demand Management Program for Plug-In Electric Vehicle Charging in the District of Columbia, filed April 21, 2017 ("Pepco's Proposed EV Program").

<sup>&</sup>lt;sup>2</sup> See Formal Case No. 1103, In the Matter of the Application of the Potomac Electric Power Company for Authority to Increase Existing Retail Rates and Charges for Electric Distribution Service ("Formal Case No. 1103"), Order No. 17539, ¶ 120, rel. July 10, 2014 ("Order No. 17539").

Formal Case No. 1123, In the Matter of the Potomac Electric Company's Notice to Construct a 230kV/138 kV/13 kV Substation and Four 230 kV/138 kV Underground Transmission Circuits on Buzzard Point ("Formal Case No. 1123"), Order No. 17851, ¶ 19, rel. April 9, 2015 ("Order No. 17851").

sustainability; and, in the near-term, to make the distribution energy delivery system more reliable, efficient, cost effective, and interactive.<sup>4</sup> The Order also established a series of workshops to be held in the proceeding; the first in October 2015, the second in November 2015, and the third on March 17, 2016.

3. At the conclusion of the third workshop, the Commission announced that staff would prepare a MEDSIS Report that would address the comments and make recommendations on the next steps. The staff prepared the report and, on January 25, 2017, the Commission issued the report for public comment.<sup>5</sup> By Order No. 18717, the Commission granted the District of Columbia Government's ("District Government") motion to extend the initial and reply comment period to April 10, 2017 and May 10, 2017, respectively.<sup>6</sup> On February 28, 2017, the Commission held a MEDSIS Town Hall Meeting to discuss the proposed pilot project parameters identified in the Staff Report. Finally, by Order No. 18812, the Commission granted Pepco's request to initiate a formal comment period on the OPC Value of Solar Report filed in the *Formal Case No. 1130* docket on May 19, 2017; initial and reply comments were due on July 12, 2017 and July 24, 2017, respectively.<sup>7</sup>

# III. <u>DISCUSSION</u>

4. Clean Energy DC, the draft climate and energy plan for the District of Columbia, recommends, among other things, creating a vision of the District's future electricity system to be used to define grid capabilities and characteristics of the delivery system and characterize the transition required to achieve this vision. Moreover, Clean Energy DC states, "As a first step, the District Government should clearly establish, reiterate, and quantify the District's objectives for grid modernization as they relate to its 2032 GHG reduction, energy use reduction, and renewable energy utilization targets, as well as the areas of efficiency, resilience, reliability, security,

<sup>&</sup>lt;sup>4</sup> Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Distribution System for Increased Sustainability, Order No. 17912, rel. June 12, 2015.

<sup>&</sup>lt;sup>5</sup> Formal Case No. 1130, Order No. 18673, rel. January 25, 2017.

<sup>&</sup>lt;sup>6</sup> Formal Case No. 1130, Order No. 18717, ¶¶ 1, 7-8, rel. March 9, 2017.

Initial comments on OPC's Value of Solar Study were filed by DC Solar United Neighborhoods and Potomac Electric Power Company. *See Formal Case No. 1130*, DC Solar United Neighborhoods Comments on People's Counsel's Value of Solar Study, filed July 11, 2017; *Formal Case No. 1130*, Potomac Electric Power Company Comments on People's Counsel's Value of Solar Study, filed July 12, 2017. Reply comments were filed by Department of Energy and Environment and Office of the People's Counsel. *See Formal Case No. 1130*, Department of Energy and Environment Reply Comments on People's Counsel's Value of Solar Study, filed July 24, 2017; *Formal Case No. 1130*, Office of the People's Counsel Reply Comments on People's Comments on the Office of the People's Counsel's Value of Solar Study, filed July 24, 2017. The Commission notes that Staff has reviewed the comments submitted in response to OPC's Value of Solar Report and that the Commission will give the Report and its conclusions appropriate consideration in future solar-related matters before the Commission.

Record Clean Energy DC, Draft October 2016 at p. 137, Department of Energy & Environment, https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Clean\_Energy\_DC\_2016\_final\_print\_single\_pages\_102616\_print.pdf.

flexibility, and interactivity." We believe that the Commission's vision must be compatible with the city's vision so that we can all move harmoniously toward the same goal, using our available resources as wisely as possible.

#### A. Vision Statement

5. The Commission commends Staff for undertaking the important task of crafting a vision statement as a guide to move us forward, particularly at this crucial time when so much of the infrastructure is being replaced. It is important that we give all stakeholders a meaningful opportunity to weigh in on the proposed vision statement before moving forward so we are putting the staff's proposal out for comment and, at the same time, offering some thoughts of our own. 10

#### B. Guiding Principles and Objectives

6. The Public Service Commission of Maryland ("Maryland PSC") set forth guiding principles for the future of Maryland's electric distribution systems. <sup>11</sup> Additionally, regulators in Massachusetts, New York, Minnesota and Hawaii have similarly established guiding principles and convened stakeholder processes with regard to their respective grid modernization investigations. <sup>12</sup> We invite the public to include in its comments a discussion of whether any of these (or other) guiding principles should be included in the Commission's vision statement.

# C. Energy Delivery System Assessment

7. Given the comments submitted on the MEDSIS Staff Report, it may be helpful for the Commission to undertake a comprehensive review of the District's current energy delivery system to determine its capabilities so all of us have a better idea of how to modernize the system. A cursory glance of the Commission's docket shows other pending proceedings that impact the

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October 2016 at p. 138, Department of Energy & Environment, https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Clean\_Energy\_DC\_2016\_final\_print\_single\_pages\_102616\_print.pdf.

The Commission notes the MEDSIS Staff Report contained proposed Notice of Proposed Rulemakings ("NOPRs") on grid modernization-related definitions as well as amending the Commission's notice of construction ("NOC") rules. The Commission will soon release the NOPRs for public comment. However, the definitions are subject to further revision if future developments in the MEDSIS proceeding so warrant.

In the Matter of Transforming Maryland's Electric Distribution System to Ensure that Electric Service is Customer-Centered, Affordable, Reliable and Environmentally Sustainable in Maryland, Maryland PSC Public Conference 44, Notice, January 31, 2017.

See, e.g., Massachusetts Department of Public Utilities Docket 12-76, Order No. 12-76-B, Investigation by the Department of Public Utilities on its own Motion into Modernization of the Electric Grid, October 2, 2012; New York Public Service Commission Case No. 14-M-0101, Order Adopting Regulatory Policy Framework and Implementation Plan, February 26, 2015; Minnesota Public Utilities Docket No. 15-556, Commission Staff Report on Grid Modernization, March 24, 2016; Public Utilities Commission of Hawaii Docket No. 2016-0087, Order No. 34281 at 51, Dismissing Application Without Prejudice and Providing Guidance for Developing a Grid Modernization Strategy, January 4, 2017.

District's energy delivery system. For instance, Pepco is undergrounding electric powerlines<sup>13</sup> and constructing substations and transmission circuits.<sup>14</sup> Pepco is also proposing to construct underground transmission circuits to rebuild substations,<sup>15</sup> and has submitted a proposal for limited demand management for plug-in vehicle charging.<sup>16</sup> Washington Gas is engaged in an extensive pipe replacement effort<sup>17</sup> and a mechanical coupling replacement program.<sup>18</sup> As these efforts may ultimately pass on significant costs to ratepayers, the Commission believes it is important to undertake a holistic approach to the MEDSIS Initiative that considers everything that has been and is currently being undertaken with regard to the electric and natural gas delivery system. The Commission further believes that stakeholders deserve to know that future decisions with regard to modernizing the energy delivery system are prudent. Therefore, the Commission seeks stakeholder comments on whether a full assessment of the current capabilities and characteristics of the District's current energy delivery system is warranted at this time and whether it would be prudent to retain an independent consultant to conduct the assessment, using a portion of the \$21.55 million Pepco and Exelon agreed pay into the *Formal Case No. 1130* MEDSIS Pilot Project Fund Subaccount.

## **D.** Working Groups and Consultants

8. While the District was among one of the first jurisdictions to undertake a broad modernization initiative, focusing on both the electric and gas systems, since the release of the MEDSIS Staff Report, a number of states have taken actions that are worth noting. For instance, the Maryland PSC established six topics for consideration by stakeholder working groups led by Maryland PSC staff.<sup>19</sup> The New Hampshire Public Utilities Commission ("New Hampshire PUC"), which issued its final report on March 20, 2017, created a stakeholder grid modernization

See Formal Case No. 1145, In the Matter of Applications for Approval of Biennial Underground Infrastructure Improvement Projects Plan and Financing Orders.

See Formal Case No. 1123.

See Formal Case No. 1144, In the Matter of the Potomac Electric Power Company's Notice to Construct Two 230 kV Underground Circuits from the Takoma Substation to the Rebuilt Harvard Substation and from the Rebuilt Harvard Substation to the Rebuilt Champlain Substation.

See Formal Case No. 1143.

See Formal Case No. 1115, Application of Washington Gas Light Company for Approval of a Revised Accelerated Pipe Replacement Program.

See Formal Case No. 1027, In the Matter of the Emergency Petition of the Office of the People's Counsel for an Expedited Investigation of the Distribution System of Washington Gas Light Company; GT97-3, In the Matter of the Application of Washington Gas Light Company for Authority to Amend its Rate Schedule No. 6; and GT06-1, In the Matter of the Application of Washington Gas Light Company for Authority to Amend General Service Provision No. 23.

In the Matter of Transforming Maryland's Electric Distribution System to Ensure that Electric Service is Customer-Centered, Affordable, Reliable and Environmentally Sustainable in Maryland, Maryland PSC Public Conference 44, Notice, January 31, 2017.

working group to create an open dialogue and reach consensus on key modernization topics. <sup>20</sup> The Rhode Island Public Utilities Commission ("Rhode Island PUC") opened Docket 4600, a stakeholder process to build consensus on issues related to the changing electric distribution system.<sup>21</sup> The Rhode Island PUC Docket 4600 Working Group issued its final report on April 5, 2017 and that report was accepted by the Rhode Island PUC on July 31, 2017.<sup>22</sup> The Commission notes that the Maryland PSC has retained consultants to analyze the benefits and costs of distributed solar energy resources in Maryland and to provide policy and technical consulting services to implement rate design pilot programs.<sup>23</sup> The Massachusetts Department of Public Utilities, New Hampshire PUC, and Rhode Island PUC also retained consultants to facilitate their respective stakeholder working group discussions. The Commission seeks stakeholder input on whether it would be prudent to retain an independent consultant, using a portion of the \$21.55 million Pepco and Exelon agreed to pay into the Formal Case No. 1130 MEDSIS Pilot Project Fund Subaccount, to act as a facilitator in stakeholder working groups or to handle certain aspects of the Commission's MEDSIS Initiative such as MEDSIS pilot programs.<sup>24</sup> Ideally, with input from stakeholders, the consultant would provide the Commission with consensus recommendations. We invite stakeholder comment on whether, and to what extent, a consultant would be useful to help move the MEDSIS Initiative forward more expeditiously.

#### E. Electric Vehicles

9. When the Commission opened this investigation, an examination of electric vehicles was among the various topics that were listed for consideration.<sup>25</sup> On April 21, 2017, Pepco filed a proposal seeking approval for a limited, voluntary demand management program for plug-in electric vehicle ("PIV") charging in the District of Columbia ("EV Program") consisting of five offerings with varying options and to allow Pepco to focus on expanding PIV use in the District of Columbia.<sup>26</sup> On April 27, 2017, the Commission opened *Formal Case No. 1143* to

Investigation into Grid Modernization, New Hampshire PUC IR 15-296, Order No. 25, 877, April 1, 2016.

In re: Investigation into the Changing Electric Distribution System and the Modernization of Rates in Light of the Changing Distribution System, Docket No. 4600, Notice of Commencement of Docket and Invitation for Stakeholder Participation, March 18, 2016.

In re: Investigation into the Changing Electric Distribution System and the Modernization of Rates in Light of the Changing Distribution System, Docket No. 4600, Report and Order, July 31, 2017.

See Maryland PSC Order No. 86990, Case No. 9361 at A-19 (Merger Condition 14) (The Maryland PSC required Pepco Holdings, Inc., as a condition of the Exelon/PHI merger, to submit a "grid of the future" plan and commit \$500,000 of non-ratepayer funds to support a consultant (or consultants) for this effort).

The Commission holds in abeyance any decision on the proposed pilot project parameters.

<sup>&</sup>lt;sup>25</sup> Formal Case No. 1130, Order No. 17912, rel. June 12, 2015.

Formal Case No. 1143, Potomac Electric Power Company's ("Pepco") proposal for a limited demand management program for plug-in electric vehicle charging in the District of Columbia, filed April 21, 2017 ("Pepco's Proposed EV Program").

consider Pepco's EV Program proposal and requested public comment on Pepco's proposal.<sup>27</sup> Some commenters indicated that the EV Program should be addressed in this proceeding rather than in a separate proceeding. Considering that the Commission included an examination of electric vehicles among the various topics that would be considered in this proceeding, we believe the more prudent and administratively efficient course of action is to transfer the entire docket of *Formal Case No. 1143* to this proceeding.

# THEREFORE, IT IS ORDERED THAT:

- 10. The Commission Staff's proposed MEDSIS Vision Statement is accepted into the *Formal Case No. 1130* docket;
- 11. Initial comments on the Commission Staff's proposed MEDSIS Vision Statement are due sixty (60) days from the date of this Order and reply comments are due thirty (30) days thereafter;
- 12. Comments with regard to any principles and objectives the Commission should adopt to guide the modernization of the District's energy delivery system are due sixty (60) days from the date of this Order and reply comments are due thirty (30) days thereafter;
- 13. Comments on whether a full assessment of the current capabilities and characteristics of the District's current energy delivery system is warranted at this time and whether it would be prudent to retain an independent consultant to conduct the assessment, using a portion of the \$21.55 million Pepco and Exelon agreed pay into the *Formal Case No. 1130* MEDSIS Pilot Project Fund Subaccount, are due sixty (60) days from the date of this Order and reply comments are due thirty (30) days thereafter;
- 14. Comments on whether the Commission should retain an independent consultant, using a portion of the \$21.55 million Pepco and Exelon agreed pay into the *Formal Case No. 1130* MEDSIS Pilot Project Fund Subaccount, to act as a facilitator in stakeholder working groups or to handle certain aspects of the Commission's MEDSIS Initiative such as MEDSIS pilot programs are due sixty (60) days from the date of this Order and reply comments are due thirty (30) days thereafter; and
  - 15. The entire docket of Formal Case No. 1143 is transferred to Formal Case No. 1130.

A TRUE COPY: BY DIRECTION OF THE COMMISSION:

CHIEF CLERK: BRINDA WESTBROOK-SEDGWICK

**COMMISSION SECRETARY** 

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# THE PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

Formal Case No. 1130, Modernizing the Energy Delivery System for Increased Sustainability

Staff's Proposed MEDSIS Vision Statement

ISSUED: October 18, 2017

# **INTRODUCTION**

In its adoption of the Retail Electric Competition and Consumer Protection Act of 1999 and the Retail Natural Gas Supplier Licensing and Consumer Protection Act of 2004, the Council of the District of Columbia (Council) envisioned the District of Columbia's ("District") energy delivery system as open, competitive, interactive, safe, and reliable. The District's energy delivery system has made great strides since restructuring and the Commission has and continues to update and expand upon the Council's vision for the District's energy delivery system. In furtherance of the Council's vision, the Public Service Commission of the District of Columbia (Commission) initiated the MEDSIS Initiative (Initiative) to address our role in ensuring the District's energy delivery system is modernized to meet the present and future energy needs of District ratepayers as well as the District's environmental protection and energy conservation goals.

Since the MEDSIS Initiative began in 2015, the Commission has worked diligently to make sure the foundation of the Initiative is solid and that the process is transparent, collaborative, and rooted in public engagement with a focus on information and data sharing between the Commission, utilities, government agencies, industry stakeholders, consumer advocacy groups, and individual citizens. To that end, the Commission: (1) held three public workshops between October 2015 and April 2016; (2) developed and issued, with an extended comment period, a detailed MEDSIS Staff Report in January of 2017, which, among other things, analyzed information gathered in the initial public engagement phase, identified regulatory barriers to the modernization process, provided proposed notice of proposed rulemakings (NOPRs) containing new and modified initiative-related definitions to enhance regulatory certainty; (3) highlighted questions related to microgrid development; and (4) held a MEDSIS Town Hall Meeting in February 2017 to hear public comment on the proposed Pilot Project Program Parameters, detailed in the MEDSIS Staff Report, which address how the \$21.55 million in the MEDSIS Fund could be used to further the Initiative.

The extended public comment period on the MEDSIS Staff Report ended in May 2017. Commission Staff has thoroughly reviewed and considered the substantive comments filed by the public. The comments were detailed and varied; a common thread expressed in several of the filings is the need for the Commission to develop a vision for the MEDSIS Initiative. Commission Staff agrees that development of a vision for modernizing the District's energy delivery system is necessary. The vision will not only aid continued public and stakeholder engagement in the process, but it will also provide a framework for the Commission to evaluate utility infrastructure spending proposals, the appropriateness of pilot projects requesting MEDSIS funding, as well as the value and potential impact of non-utility projects needing Commission approval. Therefore, with consideration of the wealth of information submitted to the Commission since the inception of the MEDSIS Initiative, as well as consideration of the Commission's statutory mandate to ensure just and reasonable rates and the financial health of the District's utilities, Commission Staff proposes the following vision for modernizing the District's energy distribution system.

The MEDSIS Staff Report, public comments, stakeholder presentations, MEDSIS workshop materials, and all other MEDSIS-related information is publicly available on the MEDSIS webpage at <a href="https://www.dcpsc.org/medsis">www.dcpsc.org/medsis</a>.



See Attachment A – Summary of Comments filed on the MEDSIS Staff Report.

Staff recommends that the Commission release the proposed vision statement for public comment providing sixty (60) days for initial comments and thirty (30) for reply comments from the date of the Order.

# COMMISSION STAFF'S PROPOSED VISION FOR A MODERN ENERGY DISTRIBUTION SYSTEM

#### **MEDSIS Vision Statement**

The District of Columbia's modern energy delivery system must be 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, sustainable, interactive, and non-discriminatory.

**WELL-PLANNED:** With no large-scale generation in the District, the Commission must ensure that the distribution and transmission systems are strong and robust enough to withstand low probability, high impact events like storms, floods, and physical and cyber threats. To meet these needs, the District's modern energy delivery system must be developed in a strategic manner that is data-driven, incorporates advanced technologies, and is collaborative and open – allowing for consumer and stakeholder input. Therefore, utilities must:

Develop detailed, data-driven Distribution and Integrated Resource Plans that, among other
things: make infrastructure planning cost-effective; enable the optimal combination of
distributed energy resources (DERs) with traditional capital investment by exploring nonwires 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.

**SAFE & RELIABLE**: The Commission will ensure that utilities meet and improve safety and reliability performance and that the increasing volume of DERs interconnecting to the District's grid does not negatively impact the safety or reliability of the energy delivery system by:

- Requiring the continued investment in prudent infrastructure improvements to the energy system, like Pepco's reliability investments and Washington Gas' advance pipeline replacement program, so that the energy delivery system can meet the power needs of the District's current and future consumers.
- Reviewing and, where appropriate, updating the Commission's Electricity Quality of Service Standards (EQSS) and Natural Gas Quality of Service Standards (NGQSS) to ensure that the utilities are continually meeting and improving their safety and reliability performance.
- Updating and continually reviewing interconnection rules to facilitate the interconnection of DERs as well as all generation and storage options in a manner that does not compromise overall system safety and reliability.



- Where technically and economically feasible, encouraging the deployment of technologies that will not compromise system safety, will increase system reliability, and can accommodate two-way power flow like smart inverters, distributed automation, and sensors to better handle power fluctuations and outages.
- Enhancing data collection and real-time data sharing between utilities, third party suppliers, and stakeholders, like PJM, to increase system visibility, communication, and DER dispatchability, in a manner that increases the safety, reliability, and resiliency of the energy delivery system.
- Classifying DER and microgrid providers generating energy and serving more than one
  customer as subject to the Commission's authority thus enabling the Commission to protect
  District ratepayers, enforce the Consumer Bill of Rights (CBOR), and ensure the continued
  safe and reliable provision of energy service.

**SECURE:** The modern energy delivery system must be secure from both physical attacks to critical infrastructure components as well as from cybersecurity attacks that target energy information systems and private consumer information. Therefore, utilities and energy service providers must:

- Develop, utilize, and maintain robust physical and cybersecurity protections and risk management strategies that incorporate industry best practices like those established by the National Institute of Standards and Technology's (NIST) Framework for Improving Critical Infrastructure Cybersecurity.
- Ensure that the energy delivery system is resilient, uses modern grid security protocols, and is designed to resist, discourage, and rapidly recover from physical and cybersecurity attacks and system disruptions.
- Safeguard private and or confidential business data and consumer information from intentional or unintentional release or disclosure to untrusted environments.

**AFFORDABLE**: The Commission has a duty to ensure that rates for distribution service are just and reasonable. The Commission balances the desire of customers to keep rates down with the need to ensure that utilities remain financially healthy, able to attract investors, and pay for needed infrastructure maintenance and development. Balancing these interests, in the context of system modernization, becomes especially challenging when considering costly upgrades to the distribution system as well as potential ratepayer subsidization of costly renewable and DER technologies.

• The Commission recognizes that rapid technological change in the electric distribution industry increases the danger of "stranded assets" – capital investments that turn out to be unneeded. For this reason, before making investments in large capital projects, the utility must thoroughly examine the feasibility of non-wires alternatives as solutions to meet the stated investment objective at the lowest overall life-cycle cost. The utility must also undertake holistic planning approaches that fully examine technological options that can be deployed at a pace and scale that can meet policy objectives and customer expectations.



- In the long-term, the Commission expects that, under fair interconnection procedures, DER's will be able to stand on their own in the competitive marketplace without subsidies from distribution ratepayers. Therefore, benefits and costs of any proposals to use distribution rates to compensate new DERs must be weighed carefully.
- The Commission is committed to ensuring that ratepayers obtain maximum benefit from their over \$90 million investment in Advanced Metering Infrastructure (AMI) by requiring the utility, to the extent economically and technically feasible, to maximize the use of AMI data in Distribution and Integrated Resource Planning, load forecasting, distribution system operations, and rate design as well as require activation of the Home Area Network<sup>3</sup> capabilities of the smart meters.

**SUSTAINABLE**: A sustainable energy delivery system will meet the energy needs of the present without compromising the ability of future generations to meet their own energy needs by focusing on the *triple bottom line*: environmental protection, economic growth, and social equality.

- Environmental Protection: Recognize the negative impact that energy usage and demand have on the environment and the human component of climate change. Protect the District's natural resources and assist the District Government in reaching its *Clean Energy DC*<sup>4</sup> goals by fostering the use of more efficient energy and renewable energy sources, DER technologies, and controllable demand alternatives to reduce greenhouse gas (GHG) emissions and overall energy consumption.
- **Economic Growth:** Foster economic growth in the District's energy markets by supporting innovation and making the District a desirable place for industry to invest by: (1) removing regulatory barriers that prevent the deployment of DER technologies in the District; (2) engaging industry and community stakeholders in the regulatory reform process; (3) promoting the deployment of pilot programs that will yield lasting economic benefits to District ratepayers; and (4) encouraging innovative business models and the use of scalable financial solutions to reach grid modernization goals.
- Social Equality: Recognize the positive impact that energy usage has on the daily lives of District residents. Ensure that, to the extent economically and technically feasible, all District ratepayers have equal access to energy efficiency programs, other DER programs, and modernization technologies approved and implemented by the Commission, as well as access to the Commission's regulatory process. Strengthen community involvement in reaching environmental protection and economic growth goals related to modernizing the

The District Government, through the Department of Energy and Environment (DOEE), has established a "new climate and energy plan, with 55 actions in three major areas: Buildings, Energy Supply System, and Transportation." The Commission's work through MEDSIS aims to help the District meet its goal to reduce District-wide energy use by 50% (relative to 2012 levels) by 2032. To meet these energy usage reduction targets, the District is focused on reducing GHG emissions by cutting energy use, increasing renewable energy penetration, and reducing the District's reliance on fossil fuels. <a href="https://doee.dc.gov/cleanenergydc">https://doee.dc.gov/cleanenergydc</a>



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<sup>&</sup>lt;sup>3</sup> A Home Area Network uses a low-power radio transmitter than can communicate with digital devices within the home to make use of energy consumption data from the smart meter.

District's energy delivery systems by: (1) encouraging and approving programs that fully consider, engage, and benefit all District ratepayers, especially the most vulnerable populations; (2) encouraging continued utility and stakeholder investment in educational programs and community outreach initiatives that explain how ratepayers can reduce their energy consumption and use energy more efficiently, including the role of various energy sources, distributed generation (DG), and DERs; and (3) working with utilities and industry stakeholders to develop ways to reduce the soft costs related to the deployment of photovoltaic (PV) systems and DERs in the District.

**INTERACTIVE:** As an increasing number of smaller scale and more localized resources come online the relationship between the energy distribution company, the consumer, and service providers will become increasingly complex and dynamic. New services will become available, energy and data will increasingly flow in multiple directions, and different types and scales of resources will enter the distribution system. A modern energy delivery system must become more interactive and flexible to accommodate these types of resources while maintaining system reliability and security. This interactivity is critical both in terms of managing the distribution system and in providing locational transparency and technical feasibility which will allow ratepayers, customer-generators, and DER providers to make informed energy choices. Therefore, the Commission:

- Recognizes the importance of the customer's ability to access and share energy data. Access to data empowers customers and third parties to utilize and develop new products and services. This includes activating the Home Area Network capability on customers' smart meters to realize additional benefits of existing AMI infrastructure and streamlining AMI data sharing through tools such as *Green Button Connect My Data* which can securely transfer AMI data to authorized third parties.
- Emphasizes the importance of improving and expanding consumer and stakeholder access
  to publicly available data related to distribution system constraints and technical capacity.
  Providing public access to Geographic Information Systems (GIS) such as hosting capacity
  maps, restricted circuits, and installed and pending solar projects provides critical
  distribution system information to customer-generators, community renewable energy
  facility owners, and DER providers.
- Encourages the interaction and communication between DERs, the distribution system, and
  the macro grid and that technologies that provide value to the distribution system, such as
  smart inverters, should be prioritized over technologies that merely benefit individual
  customers.

**NON-DISCRIMINATORY:** Nondiscrimination in the operation of the District's energy infrastructure is integral to the Commission's mandate to supervise energy utilities in the District of Columbia. Furthermore, since the restructuring of the energy markets, the need for the Commission to ensure that energy utilities operate in a nondiscriminatory manner has proliferated. Nondiscrimination covers both the technical operation of and the rates and fees charged for utilizing and accessing the energy utility infrastructure. The Commission will ensure that the District's modern energy system is non-discriminatory, open to competition, and provides for customer choice in accordance with District law by:



- Affording DER providers with a low-cost and streamlined interconnection process to facilitate customer generation. Encouraging continuous improvement and development of initiatives, like Pepco's *Green Power Connection*, that facilitate DER interconnection and build off past experience to reduce or eliminate barriers so that DERs can compete on a level playing field with wholesale energy.
- Unlocking customer and system data held by the incumbent utility in a controlled manner so that customers, DER providers, and third-party suppliers can provide targeted offerings to meet system needs and better serve the needs of customers.
- Pursuing policies that are technology neutral in both system operations and rate structure so that rates remain just and reasonable.
- Achieving the maximum benefits of competition and encouraging stakeholders to bring forward proposals for the competitive provision of services now included in the regulated monopoly distribution services.



# ATTACHMENT A: SUMMARY OF THE COMMENTS ON THE MEDSIS STAFF REPORT

# A. Summary of Initial Comments

#### A. D.C. Consumer Utility Board's Comments

- 1. On February 10, 2017, D.C. Consumer Utility Board ("DC CUB") submitted a letter supporting the "formation of a stakeholders working group [] to focus discussions on priority topics and to make recommendations is an appropriate and useful next step in the process." DC CUB asserts that its "primary objective for this working group is to ensure that the views and goals of community stakeholders are well represented in shaping the overarching goals and principles and vision for MEDSIS." DC CUB recommends that a working group consider grid modernization efforts of New York, California, Connecticut, Massachusetts, Minnesota, and Hawaii. DC CUB further asserts that a "perennial concern is that the voice of community stakeholders is inadequately represented before the PSC because of the immense mismatch of resources available to community-based civic organizations in comparison to the for-profit utilities and businesses. For this reason [DC CUB] would seek a larger proportion of seats at the table be set aside for representatives from community-based organizations, including ANCs and civic/citizen organizations."
- 2. DC CUB asserts that "the first objective for any stakeholder working group must be to make recommendations on the final scope and topics, including goals, principles and a vision for MEDSIS . . . [and that] no action defining or initiating a pilot program funding process [] should occur until the PSC receives the stakeholder working group recommendations (unanimous, or majority-minority) . . ." DC CUB also recommends that using an independent third party to design the smart grid "would serve to substantially balance the resources that are available among parties." DC CUB concludes that the "competing demands on PSC staff time would make such a dedicated effort difficult for the PSC to provide in-house, [therefore,] this is an appropriate use for the MEDSIS fund."

#### B. DC Solar United Neighborhood

3. On March 6, 2017, DC Solar United Neighborhoods ("DC SUN") submitted initial comments addressing issues raised in the February 28, 2017 MEDSIS Town Hall. DC SUN supports the overall goal of this proceeding—to explore ways to modernize the District's energy delivery system so as to increase sustainability, reliability, and the integration of solar and other Distributed Energy Resources ("DERS"). DC SUN suggests that the Commission launch this

<sup>9</sup> DC SUN's Comments at 3.



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<sup>&</sup>lt;sup>5</sup> DC CUB's Comments at 1.

<sup>&</sup>lt;sup>6</sup> DC CUB's Comments at 1.

<sup>&</sup>lt;sup>7</sup> DC CUB's Comments at 2.

<sup>&</sup>lt;sup>8</sup> DC CUB's Comments at 2.

process by providing a statement of guiding principles in the form of fundamental policy objectives and define the concept of MEDSIS prior to any consideration of the pilot and demonstration project selection process. DC SUN recommends that the Commission adopt the following guiding principles at the outset, which will help set the course for the proceeding;

- 1. Consumers should have the right to access all retail electricity services, including clean energy resources, real-time usage data, and dynamic pricing;
- 2. Individual consumers, businesses, and communities (not just private developers, government, and utilities) should have the right to aggregate consumer electricity services and implement DG microgrids;
- 3. New and improving technologies are driving fundamental change in DC's electric distribution system, and changes to the regulatory structure, projects or programs are required to ensure the seamless integration of technologies that will result in clear benefits including cost reductions for DC's ratepayers;
- 4. The distribution utility must be held accountable to consumers for specific performance goals, which could include goals concerning support for alternative energy, reliability, and customer service;
- 5. Electric distribution companies and cooperatives must serve as impartial grid operators, particularly when non-regulated affiliates are market participants;
- 6. Distribution utility revenues must be based on the quality, efficiency, and reliability of the utility's distribution service, not on electricity consumption; and
- 7. Materials should be created and disseminated that describe the MEDSIS process in language that is accessible as possible to the public.<sup>11</sup>
- 4. DC Sun also suggests that the Commission specifically articulate its vision of a MEDSIS by defining what "modernizing" the grid means as it relates to the specific goals the Commission seeks to achieve in this proceeding. DC Sun believes a modern energy delivery system should:

DC SUN's Comments at 4.



DC SUN's Comments at 3.

- 1. Reduce the environmental impact of electricity and natural gas generation and usage;
- 2. Improve energy efficiency and demand management;
- 3. Permit the use of diverse energy sources—specifically, the grid should accommodate the integration of DG and other DERs;
- 4. Improve reliability and resilience;
- 5. Eliminate the significant amount of waste that occurs with the current system;
- 6. Support growth in low income resiliency programs that benefit community stakeholders;
- 7. Support the creation of community owned and managed microgrids; and
- 8. Give consumers greater control over where their electricity comes from and how it's managed. 12

#### C. Raymond Stanton

5. On March 7, 2017, Mr. Stanton submitted a public comment in support of MEDSIS.<sup>13</sup> He agrees that the Commission is doing good work and stated that "low-income access to solar is improving" and that "modernization has far to go."<sup>14</sup>

#### D. ThinkEco

6. On March 24, 2017, ThinkEco submitted comments supporting the Commission's plan in Section VII of the Report and offers their experience to aid any Commission stakeholder proceeding, in the design and implementation of new technology pilots or demonstration projects. ThinkEco is the leading utility provider for demand- side management ("DSM"), energy efficiency ("EE") and demand response ("DR") for all non-central air conditioning ("AC") units, for residential, low income, multifamily and small business market segments. In general, ThinkEco believes that all DSM program customer education and marketing that can be done before actual program implementation is beneficial to future program participation and

ThinkEco's Comments at 1.



DC SUN's Comments at 5.

Raymond Stanton's Comments.

Raymond Stanton's Comments.

ThinkEco's Comments.

performance and also believes that having marketing goals per rate class is even better. ThinkEco emphasizes the linkage between variable rates, new technology and savings performance is important, so customers understand they can have more impact (savings) when the two levers are employed together.<sup>17</sup>

7. ThinkEco also asserts that in their experience of designing and managing residential DSM programs in many jurisdictions across the US, collaborative planning and design sessions with stakeholders and the Commission participating, yields the best program results. Regarding best practices for marketing DSM programs, the company employs traditional and non-traditional marketing techniques, such as email and direct mail, website and print, phone apps, as well as social media (Facebook and Twitter). ThinkEco has recently introduced a Points & Rewards platform which is a customer engagement tool offered across their utility program universe, which has shown great results in increased customer engagement, DSM participation, and program satisfaction. PSM participation, and program satisfaction.

# E. NRG Energy, Inc.

- 8. On April 7, 2017 NRG Energy, Inc. ("NRG") submitted comments supporting the Report's approach to ensuring that the underlying regulations are clear and will facilitate consumer and third party investments and actions to implement DER, and the proposed pilot project grant program. NRG is the nation's largest independent power producer, with a diverse resource mix that includes approximately 50,000 megawatts of both renewable and conventional generation, including approximately 15,000 megawatts located in the PJM Interconnection. NRG believes that the MEDSIS initiative is a positive step toward their vision of a "four-product" future consisting of four major elements; renewables, storage, controllable demand and fast-ramping gas. 22
- 9. As a competitive supplier of electricity and supplier/aggregator of DER solutions, NRG asserts that the Report correctly concludes that utility ownership of DERs should be extremely limited.<sup>23</sup> From a competitive standpoint, NRG asserts that it is "clear that utilities do not belong in the DER market and it is also inappropriate for utility-affiliated competitive suppliers to compete for DER projects because that prospect would make it highly likely that some potential competitors would forego the District's electricity marketplace altogether, diminishing the range of choices available to customers and thwarting the potential for MEDSIS to achieve its

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ThinkEco's Comments at 1.
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NRG's Comments at 4.



ThinkEco's Comments at 1.

ThinkEco's Comments at 1.

NRG's Comments.

NRG's Comments at 2.

NRG's Comments at 3.

objectives."<sup>24</sup> NRG suggests that the most prudent course for the District and its regulated utilities is to be extremely careful to deploy utility investment only toward those functions that are uniquely and specifically related to the mission of the regulated monopoly delivery service, and to encourage consumers and third parties to provide the investment in DERs and other services that competitive suppliers are capable and eager to provide.

- 10. NRG supports the Report's proposed pilot project grant program as a means to encourage near-term deployment of a variety of DER technologies and business models in a variety of use cases but as currently structured, the program appears to impose a heavy regulatory and reporting burden on projects, which may deter some project proponents, and will lead to unnecessarily high costs. NRG recommends that the final grant program design be more carefully calibrated to ensure that it contains only the minimal regulatory oversight and data reporting needed, and that any incremental costs associated with satisfying grant requirements that would not occur in a commercial project are covered by grant funding, in keeping with the intent that projects funded through this program are intended to be the basis for market-based expansions going forward, which will be governed by commercial agreements among counterparties as opposed to being subject to a highly regulated structure. <sup>26</sup>
- 11. NRG also recommends that the final grant program include an explicit recognition that the objective of all pilot projects should be to expand and become self-sufficient market-based DER offerings requiring all projects to identify regulatory or other barriers that need to be addressed to enable the demonstrated DER and its associated business model to fully monetize their capabilities and be successful on a commercial basis. NRG asserts that the PJM wholesale markets provide a significant source of long-term value and revenue, and as such suggests that the grant program should generally favor projects that will access PJM markets to earn revenues, as these projects are more likely to find a near-term path to financial sustainability.<sup>27</sup> The Commission should also include in the structure of the grant program consideration of how project proponents will be able to scale the projects up beyond the initial demonstrations, and that the Commission will facilitate regulatory changes identified by project proponents to enable that scaling.<sup>28</sup>
- 12. The Report recommends that three types of projects not be eligible for MEDSIS Pilot Project grant funding and NRG supports the exclusion of energy efficiency and utility-sponsored projects from the grant program.<sup>29</sup> However, NRG believes that the Commission should clarify what constitutes an "unproven" technology, and ensure that late-stage developmental technologies that have been proven on the bench but not necessarily in commercial operation can

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NRG's Comments at 4.
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NRG's Comments at 7.



NRG's Comments at 6.

NRG's Comments at 6.

NRG's Comments at 6.

NRG's Comments at 6.

participate.<sup>30</sup> An objective distinction between "proven" and "unproven" technologies would ensure that proposed DER devices and systems meet safety and other basic requirements, while not precluding innovative applications of technologies that are not yet in common use.<sup>31</sup>

13. NRG suggests that the Commission clarify and specify its requirements for sponsor funding at each stage, including whether there is a requirement for sponsor funding in the Feasibility Study phase, and whether the specification of "a majority" require that 50.1% of the project costs in the later stages is sponsor-funded. In addition to the grant funding, NRG recommends that the Commission consider facilitating additional support that these early-stage demonstrations may require in order to secure financing and proceed to implementation.<sup>32</sup> And last, a matter that the Report appears to be silent on, NRG recommends that scheduling and dispatch control of the pilot project DERs rest with the project proponent, subject to voluntary agreement with the utility or a third-party aggregator.<sup>33</sup>

#### F. GRID2.0 Working Group

- 14. On April 7, 2017, GRID2.0 Working Group submitted comments stating that the Report is "strong in a narrow range of issues . . . however it is deficient in important respects" Grid 2.0 reasserts eleven principles that should be incorporated into the goals for MEDSIS which are as follows:
  - 1. Solutions should be technology neutral.
  - 2. MEDSIS should optimize tariff structures to enable and expedite technology adoption and other desirable policy prescriptions.
  - 3. Policy prescriptions should align utility incentives to public interest outcomes as identified in DC statutes and the DC Sustainability Plan,
  - 4. Growth in energy demand is no longer the key dynamic around which the grid should be designed. Reduction of CO2 intensity in the power supply should be among the key dynamics identified for grid design.
  - 5. Optimization of DER on the distribution, transmission, and generation elements of the District's electric grid should be a value function of location; set by the PSC, and periodically balanced as necessary.

GRID2.0's Comments at 2.



NRG's Comments at 7.

NRG's Comments at 7.

NRG's Comments at 7.

NRG's Comments at 8.

- 6. MEDSIS should articulate a pathway toward net zero energy demand/use in DC.
- 7. MEDSIS should reduce energy demand burden for lower income DC Residents.
- 8. Substantive stakeholder involvement in the utility planning process independent of the PSC and docketed cases.
- 9. Energy democracy should be a hallmark of grid design such that DER and innovation distribute wealth and benefits to both DC citizens and the grid, and are integrated within the current system without bias.
- 10. Characterization of the Energy Services Platform Provider should address what role the distribution utility should play in load management and DER, and whether this role should be opened to competitive bidding.
- 11. Active public-sector involvement in PSC cases should be enabled through a fund to support expert and professional assistance.<sup>35</sup>
- 15. GRID2.0 believes that any deficiencies in the Report can be advanced and completed through implementation of the stakeholder working group recommended by Commissioner Beverly but recommend that the working group must be held to milestones and a timeline as there can be no other way that fairly considers the merits and legitimate claims of competing interests.<sup>36</sup> In addition, GRID2.0 states that sustainability is not defined and that it is not obvious that there is unanimity on the measurable outcomes of "sustainability."<sup>37</sup> GRID2.0 offers brief replies to the following points as requested on pg. vii the Report:
  - Staff has appropriately set out the scope of the Commission's jurisdiction In part, however, the PSC's avoidance of issues, such as tariffs, leaves open a large range of issues for which there is no description of the PSC's authority.
  - Staff's discussion of microgrids in the District in relation to the Commission's jurisdiction and other statutory and regulatory requirements is correct see above, this also requires further discussion.

GRID2.0's Comments at 2.



<sup>35</sup> GRID2.0's Comments at 1-2.

GRID2.0's Comments at 2-3.

- The proposed pilot project grant funding parameters are appropriate possibly, but this initiative is premature in advance of stakeholders' agreement on the goals of MEDSIS and thus the scope and objectives of the pilot projects. This should not be presumed by the PSC staff. It should be a description of a (short & succinct) process of discovery.
- The proposed implementation timetable is appropriate disagree, as the stakeholder process needs to be incorporated on the front end.
- Additional information needs to be provided in the Annual MEDSIS Status Report, besides what is proposed in Table 8 – reserve response for a later date following stakeholder working group meetings.<sup>38</sup>

# G. Alevo USA Inc.

16. On April 10, 2017, Alevo USA Inc. ("Alevo"), a U.S.-based manufacturer, project developer and systems integrator of lithium-ion batteries with experience installing grid-scale battery projects filed comments on the report applauding the Commission on their work developing a strategy for Grid modernization.<sup>39</sup> Alevo first encourages the Commission to inquire how energy storage might be more cost-effective than traditional distribution investments in the District of Alevo asserts that at the distribution level, energy storage technology can help integrate renewables, ensure power quality and provide backup power to customers on critical circuits, among many other uses. 41 The technology can also be utilized behind the meter to help electric customers optimize their electric bills and bridge the gap to backup generators used for mission critical infrastructure.<sup>42</sup> Alevo encourages the Commission to encourage stakeholders to develop a framework that can be utilized to evaluate the cost-benefit of all proposed distribution investment such that it can be compared to potentially more cost-effective non-traditional technologies.<sup>43</sup> Alevo also recommends that the Commission consider battery flammability in developing use cases for battery storage within the District. Given D.C. being a highly-populated city adjacent to critical infrastructure, it would be prudent for the Commission to consider the flammability of energy storage devices to be deployed due to the well-documented risks of certain battery chemistries. 44

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<sup>38</sup> GRID2.0's Comments at 3.
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Alevo's Comments at 3.



Alevo USA Inc.'s Comments ("Alevo's Comments").

Alevo's Comments at 2-3.

Alevo's Comments at 3.

<sup>42</sup> Alevo's Comments at 3.

<sup>43</sup> Alevo's Comments at 3.

17. Last, Alevo suggests that the Commission encourage Pepco to develop an integrated strategy that will determine the most cost-effective distribution grid for ratepayers in the District of Columbia. They assert that by completing an Integrated Distribution Plan (IDP), Pepco will be able in real time to determine the optimal combination of distributed energy resources (DERs) with traditional investment that will lead to a flexible, resilient, safe and cost-effective grid.

## H. Department of Energy and Environment by Office of the Attorney General

- 18. On April 10, 2017, the District's Department of Energy and Environment ("DOEE") filed comments on the Report expressing its concern for the lack of progress and clear direction for MEDSIS as outlined in the Report.<sup>45</sup> DOEE states that the Report lacks a vision of what a modernized system should look like for the District, fails to lay out a roadmap for modernizing the system and that more sufficient guidance from the Commission is needed to achieve modernization of the system and accomplish key District legislative mandates and executive orders.<sup>46</sup>
- 19. DOEE has laid out key issues along with its recommendations in its comments. First, DOEE expresses that the Report lacks a vision and a roadmap and recommend that the Commission develop a vision and a roadmap through a stakeholder process facilitated by an independent grid modernization expert. To address these key issues of a vision and a roadmap, DOEE recommends convening a stakeholder workshop, in agreement with Commissioner Beverly's statement, and given the complexity of this work, the Commission should hire an independent expert on modernization for facilitation. Second, DOEE asserts that the Commission should consider data-driven resource planning and evaluation and recommend developing a distribution resource planning process and develop a process for soliciting and evaluating non-wires alternatives with respect to infrastructure planning, based on the consensus of stakeholders and the Commission. DOEE goes on to state that the distribution system plan should include all the information necessary for stakeholders to review and provide input on, and the Commission to make findings on, the distribution utility's plan for investing in DERs and distribution infrastructure for the next five years.
- 20. Then, DOEE asserts that the Report unnecessarily limits the scope of topics ripe for discussion in this proceeding and recommends the Commission allow the stakeholders and Staff to discuss all necessary concepts and tools for furthering the work of FC 1130.<sup>49</sup> Next, DOEE states that key concepts and tools must be explored and piloted and recommend the Commission identify key concepts, analyses, and projects to achieve modernization of the District's energy delivery system. This list should include the following: scenario and alternatives analysis using

DOEE's Comments at 20.



DOEE's Comments.

DOEE's Comments at 1.

DOEE's Comments at 11.

DOEE's Comments at 15.

grid modeling, DER aggregation, time-varying rates, performance-based incentives, district energy including microgrids, and energy storage including battery storage.<sup>50</sup> And Last, DOEE asserts that the Report's recommended action items are inadequate and therefore recommend that the Commission expand the list of action items to include those recommended by DOEE and those in Commissioner Beverly's Statement, as well as provide an implementation timeline.<sup>51</sup>

#### I. Center for Renewables Integration

- 21. On April 10, 2017, The Center for Renewables Integration ("CRI") is a nonprofit team of energy professionals that works to provide state policymakers with the information needed to put rules, regulations and market mechanisms in place that support a rapid pace of renewables deployment, enabled by battery storage and advanced controls. CRI submitted comments generally applauding the Report and in general support of the definitions of technologies in the Draft NOPR proposed for inclusion.
- 22. Regarding the Report's Grant Funding Qualification Parameters, CRI agrees with Staff that the Commission should set priorities for the pilot project program, and submits that the policy priorities emphasized above are particularly important given the District's aggressive goals for solar power deployment established in the District's Renewable Portfolio Standard (RPS). CRI believes that MEDSIS should place significant emphasis on enabling high penetration solar given the District's aggressive RPS goals as the Districts 2032 requirement that 5% of the City's generation come from solar facilities located within the District or in locations served by a distribution feeder serving the District, does not represent the full potential for solar deployment.<sup>52</sup> CRI also suggests that the Commission place a priority on secure, and accessible, data modeling, collection and analysis regarding District's distribution grid and having a common model to use to analyze the data and evaluate the results will help ensure the success of the pilots. Ideally, at the end of the MEDSIS pilot phase, CRI hopes that enough data will have been collected from the pilots to inform long-term policy decisions that will enable the District to achieve the MEDSIS goals. To achieve that outcome, CRI asserts that the Commission will need to ensure that each set of pilot projects is designed to test for specific outcomes and gather objective data – both on the technical performance of DER as well as their cost and value.
- 23. CRI recommends that the Commission dedicate a portion of the MEDSIS funds to create "simulation projects" on individual distribution circuits that would aggregate high-penetration solar together with battery storage, smart inverters and distributed energy resource management systems. CRI also recommends, that MEDSIS pilot funds be used to gather data that can inform future ratemaking decisions. In particular, CRI recommends that the Commission undertake economic evaluations that include investigating "local distributed generation capacity value" of DER, pilot that specifically include projects that provide solutions for distributed voltage control and reactive power management, evaluate the role of time-of-use retail rates in advancing DER adoption and implementing pilots that specifically target placing storage at different point on

<sup>52</sup> CRI's Comments at 5.



DOEE's Comments at 21.

DOEE's Comments at 27.

the distribution grid with the explicit objective of determining the economic value of the storage at those various locations.<sup>53</sup>

- 24. CRI concurs with Staff's recommendations on interconnection issues that should be addressed but suggests, however, that additional issues should be addressed as well.<sup>54</sup> Specifically, CRI recommends that interconnection guidelines should include explicit provisions relating to smart inverters, and that the evaluations performed in Pepco's interconnection process should begin to incorporate analysis of the potential impacts of storage, smart inverters and DERMS on increasing hosting capacity and lowering interconnection costs.
- 25. CRI recommends that Pepco begin to evaluate the potential impacts on its evaluation criteria and its hosting capacity maps of the deployment of storage, smart inverters and DERMS because the use of these companion technologies will be needed to increase hosting capacity. Additionally, CRI recommends that the Commission also require Pepco to study the alternatives for DERMS, separate and apart from any testing. To conclude, CRI recognizes that the Commission does not have the ability to dictate the electricity products that PJM designs, but suggests that the Commission consider exploring with other PJM state Commissions, whether the California Independent System Operator ("CAISO") experienced with high-penetration solar and the duck curve warrants exploring the need for fast ramping generation services in PJM. 56

#### J. PJM Interconnection LLC

- 26. PJM Interconnection, LLC ("PJM"), the Regional Transmission Organization (RTO) that coordinates the movement of wholesale electricity in all or parts of thirteen states and the District, submitted comments on April 10, 2017 generally looking forward to collaborating with the Commission and Pepco in MEDSIS.
- 27. In order to maximize the benefits of DERs, PJM would welcome the opportunity to work with the District and Pepco to consider how the location and operation of both dispatchable and non-dispatchable DERs may be made known to PJM, and to consider whether and how PJM may be able to call upon dispatchable DERs (through Pepco or other aggregator) if such resources could alleviate reliability issues on the wholesale grid.<sup>57</sup>
- 28. PJM asserts that any ability to receive telemetered output data (even aggregated data) through coordination with Pepco (and the other EDCs across the PJM region) or the resource developers/aggregators would greatly enhance PJM's forecasting capabilities and benefit reliability, market and transmission build out efficiency. PJM therefore encourages the Commission to consider how additional information and data may be provided to PJM to achieve

PJM's Comments at 3.



<sup>&</sup>lt;sup>53</sup> CRI's Comments at 7-10.

<sup>&</sup>lt;sup>54</sup> CRI's Comments at 10.

<sup>&</sup>lt;sup>55</sup> CRI's Comment's at 12.

<sup>&</sup>lt;sup>56</sup> CRI's Comment's at 13.

the reliability and efficiency benefits. PJM also urges the Commission to consider revising its rules in the future so that ride- through functionality is required and suggests that one approach to this may lie in a future revision of the IEEE 1547 standard.<sup>58</sup> PJM would welcome the opportunity to work with the Commission and stakeholders to study any revised IEEE 1547 standard and to craft a DER interconnection rule that includes both voltage and frequency ride through.

29. PJM welcomes the opportunity to work with the Commission and stakeholders on the MEDSIS Pilot Project program and encourages the Commission and pilot project review board to look favorably upon proposed projects that seek to provide reliability benefits to the bulk power system through greater visibility and situational awareness of their operation, as well through utilization of smart inverter technology.<sup>59</sup> PJM also requests, to the extent that the Commission decides to convene a working group or establish a stakeholder Board, that the Commission invite PJM's participation and suggests that the Commission draw upon their expertise and experience in integrating all types of generation and storage resources as it evaluates an integration and operational plan to maximize the benefits of the District's DER deployment.<sup>60</sup>

#### K. DC Climate Action

- 30. DC Climate Action ("DCCA") filed its comments on April 10, 2017 agreeing that the Report has many strengths but focuses its comments on aspects that can be improved, the process and the substance. In terms of the process, DCCA agrees with Commissioner Beverly's suggestion of a working group to engage in a reasoned discussion of the substantive issues raised in the comments on the Staff Report, and to agree on ways to resolve those issues. DCCA asserts that stakeholders would bring different perspectives, knowledge, and interests to the table that can be expected to fill the identified gaps in the Report through constructive dialogue and generate new ideas and solutions. DCCA believes that such a working group should be given three to four months to resolve the identified issues or report the different arguments and positions.
- 31. DCCA has many concerns regarding the substance of the Report. First DCCA welcomes framing of the MEDSIS goals provided by Commissioner Beverly's statement in which he states that "the MEDSIS proceeding should be directly aligned with and in support of the District's executive policy and legislative mandates" which deal with clean energy and reduction of carbon emissions. DCCA states that the Report is uneven in its reference to these mandates and that the sustainability goal that they address, and the mandates by which they address it, should be treated consistently as a guide star in choices on distribution system modernization.

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PJM's Comments at 5.PJM's Comments at 5.
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DCCA's comments at 2.



PJM's Comments at 5.

DCCA's comments at 1.

DCCA's comments at 2.

DCCA's comments at 2.

- 32. DCCA believes that the Report is unclear on how to choose among potential pilot projects, which is an issue that should be on the agenda of the proposed working group and that project selection criteria should make it clear that pilot projects are for learning what we do not already know. <sup>65</sup> Also, DCCA asserts that Pilot projects that use software systems to help managers (including utilities and regulators) make choices on policies or investments should also be considered and that the pilot project sub-account should be open to selective reviews of what has been learned already from other jurisdictions' work on distribution modernization. <sup>66</sup>
- 33. Furthermore, DCCA suggests that the criteria for project selection should also include the potential for synergies between different pilots. DCCA believes that the Report's proposal that pilot projects be required to fit into the existing long-term plans of our electric and gas utilities should be relaxed or clarified to say that pilot projects must offer a better way to address a problem that the District and its utilities face. DCCA also recognizes that the Report could not address certain important issues regarding rate design, regulatory models, and system planning and design, but it should, however, make provision in the MEDSIS strategy for these areas to be considered, because they affect greatly the optimal distribution modernization path. <sup>67</sup>
- 34. DCCA goes on to suggest that the Report offer more discussion of the District's special characteristics that give it jurisdictional advantages as well as more detail on the opportunities enabled by new technologies to improve power distribution system efficiency for energy savings and cleaner energy including Volt/VAR Optimization, Advanced ("Smart") Inverters and Gas Distribution system planning. <sup>68</sup>

# L. Apartment & Office Building Association

35. On April 10, 2017, The Apartment and Office Building Association of Metropolitan Washington, ("AOBA"), filed comments supporting the efforts of the Commission but with some concerns about the Report. AOBA is concerned that there is an absence of data regarding the costs of MEDSIS initiatives discussed in the Staff's Report and therefore encourage the Commission, stakeholders and the District of Columbia Government to develop budgets for the proposed initiatives and recommendations in the Report and determine with specificity, how the initiatives are financed, who pays and the impact on consumers. AOBA is also concerned that ratepayers will burdened with higher utility rates in order to transform the electric distribution system and DOEE's Clean Energy DC and Climate Ready DC reports are important barometers on the scope of the core issues of concern to AOBA and its members. AOBA asserts that "there

AOBA's Comments at 2-3.



DCCA's comments at 3.

DCCA's Comments at 4.

DCCA's Comments at 5.

DCCA's Comments at 5-8.

is a clear need for the Commission to prevent escalation of utility rates, and to hold harmless ratepayers who remain committed to the electric grid."<sup>70</sup>

# M. Constellation Companies and Exelon Generation Company, LLC

- 36. On April 10, 2017, Exelon Generation Company, LLC ("ExGen"), Exelon Microgrid, LLC, along with the following ExGen subsidiaries: Constellation NewEnergy, Inc., Constellation Energy Power Choice, LLC, Constellation Energy Nuclear Group, LLC, and BGE Home Products & Services, LLC ("Constellation") (collectively, "Constellation/ExGen") filed its comments on the Report applauding the Commission's investigation into MEDSIS. Given that ExGen is a wholesale supplier, the Constellation entities provide competitive retail services and that the bulk of the Report focuses on the delivery system, the comments submitted were "narrowly focused on a few issues that impact the abilities of ExGen to continue to ensure the adequacy and availability of a sustainable generation supply and of Constellation to continue to partner with the District's customers to deliver innovative competitive products that are reliable, efficient and cost-effective."
- 37. Constellation/ExGen asserts that the Commission should not restrict from the procurement process, pilot projects proposed and led by unregulated subsidiaries and affiliates of regulated utilities. Instead, all market participants should be eligible to participate on a level playing field for pilot project initiatives to lead to innovative and cost-effective results. Constellation/ExGen appreciates the Staff Report's recognition that MEDSIS should not come at the expense of important policies such as retail choice, however, given the complexity associated with ensuring retail choice in each of the several microgrid types discussed in the Staff Report, Constellation/ExGen acknowledged that this issue will require continued stakeholder deliberation. Constellation/ExGen encourages stakeholders to recognize the value associated with allowing the end use customer to choose to participate or not in a microgrid when possible.

# N. The Microgrid Resources Coalition by Drinker, Biddle and Reath

- 38. On April 10, 2017, the Microgrid Resources Coalition ("MRC") filed comments "strongly support[ing] the Staff and Commission's efforts to explore a modernized grid through a stake-holder process" however highlighting the need to protect microgrid development models supported by existing regulations while exploring new frameworks. The MRC is a consortium of microgrid owners, operators, developers, suppliers, and investors "formed to advance microgrids through advocacy for laws, regulations and tariffs that support their access to markets, compensate them for their services, and provide a level playing field for their deployment and operations." <sup>72</sup>
- 39. The MRC encourages the Commission to explore regulatory frameworks that foster the development of microgrids, and other advanced DER. MRC asserts that this exploration should include examining the development of distribution grid sensory measurement and control

The MRC's Comment's at 3.



AOBA's Comments at 10.

Constellation/ExGen's Comments at 3.

infrastructure to enable distributional utilities to coordinate the procurement of services from flexible and dispatchable distribution level resources to provide ratepayers more reliable and dynamic services. The MRC stresses the importance of maintaining what works under the current framework as the Commission explores its evolution. The MRC is concerned that the Report takes a limited view of the potential benefits of microgrids and should offer more recognition of the value microgrids are able to provide to the broader grid and therefore encourages Staff and the Commission to recognize that the same operational flexibility that provides benefits to their hosts makes microgrids uniquely suited to create efficiencies for the grid. The MRC also notes that microgrids are economically feasible given that a microgrid will allow for far more monetizable value than simply supplying less expensive commodity power.

#### O. Environmental Defense Fund

- 40. On April 10, 2017, Environmental Defense Fund ("EDF") filed comments on the Report commending the Commission's work and encouraging the Commission to craft a path towards grid modernization that is responsive to the unique characteristics of D.C.'s energy market and that builds on the foundation laid by D.C.'s energy policies and goals.<sup>74</sup>
- 41. EDF believes that further guidance and transparent information-gathering is needed to give all stakeholders an opportunity to meaningfully engage on how grid modernization can be leveraged to help achieve D.C.'s energy objectives. EDFrecommends that the Commission initiate a robust stakeholder engagement process to develop definitions, scope, key questions and principles in alignment with Commissioner Beverly's statement on a collaborative or stakeholder working group. EDF also believes that one common constructive foundation is the formulation of guiding principles and goals in the path towards grid modernization and further asserts that having a framework in place that clarifies principles and goals is critical because it also informs how regulators and stakeholders can identify and prioritize technologies, functions, and capabilities the future grid should offer to meet D.C.'s grid modernization objectives. EDF then goes on to suggest that it would be in the interest of all stakeholders, to collaboratively develop a set of comprehensive metrics closely tied to policy goals that track and assess the progress made on objectives linked to on-going grid modernization investments.
- 42. EDF's comments also offer an overview of a selection of common grid modernization components; Customer Engagement and Data Access and Volt/VAR optimization ("VVO").<sup>77</sup> EDF explains that engaging all customers is crucial to optimizing the use of smart technology investments and to harnessing a modernized electric grid and that VVO has been an

EDF's Comments at 6.



The MRC's Comments at 3-4.

EDF's Comments.

<sup>&</sup>lt;sup>75</sup> EDF's Comments at 4-5.

EDF's Comments at 5.

integral component of grid modernization efforts across the country and therefore should have been mentioned in the report. <sup>78</sup>

#### P. United States General Services Administration

43. The U.S. General Services Administration ("GSA") filed comments on April 10, 2017 concurring with the Report's basic recommendations, and urging the Commission to develop a framework and schedule for conducting the contemplated rulemakings. GSA believes that the Reports does not recommend specific policy options for the Commission, appears to be designed primarily to move the MEDSIS process forward, and sets forth indefinite timelines for completing the recommended actions.<sup>79</sup>

#### Q. Mission: data Coalition

- 44. The Mission: data Coalition ("Mission: data"), a national coalition of over 40 technology companies delivering consumer focused data-enabled energy savings for homes and businesses, submitted comments on April 10, 1017. Overall, Mission: data is pleased that the Report discussed third party access to meter data, however, believes that the discussion was brief and therefore offered two points in support of data access so that customers can realize tangible benefits of the Advanced Metering Infrastructure (AMI) investments in the District. First, Mission: data strongly recommends that the Commission require periodic certification of Pepco's Green Button Connect My Data ("GBC") implementation. Mission: data asserts that the GBC standard is expected to be updated once every two or three years, so certification need only be completed on that timeframe, after a new standard is released. Second, Mission: data asserts that DER providers must be able to trust the reliability of Pepco's GBC service and therefore, the Commission should consider a reliability, or "uptime," requirement in this proceeding.
- 45. Furthermore, Mission: data believes the Home Area Network ("HAN") for accessing real-time meter readings should be addressed in this case because it is integral to DER service delivery in the District and since real-time meter information is going to be utilized most heavily by DER providers.

#### R. Sunrun Inc.

46. On April 10, 2017, Sunrun Inc. ("Sunrun"), a residential solar provider operating in Washington, D.C. and numerous locations across the country, filed comments supporting the report's recommended actions. Sunrun asserts that although PV systems and energy storage are both separately listed, a system that includes both – otherwise known as solar plus storage – is not included. Sunrun's only recommendation regarding the MEDSIS Pilot Projects is for purposes of clarity, that Staff include solar plus storage systems in the list of DERs as it would be ideal for Pilot Project eligibility.

Mission: Data's Comments at 2.



EDF's Comment at 7.

GSA's comments at 7.

#### S. Enerblu Grid Services, Inc.

47. On April 10, 2017, Enerblu Grid Services ("EGS") filed comments "strongly urg[ing] the Commission to proceed rapidly with implementation of the MEDSIS Pilot Project program as it is described in the staff report." EGS believes that no benefit will be gained by postponing this vital MEDSIS component; on the contrary, delays at this stage in the proceeding will increase the risk of the losing critical elements of momentum and stakeholder focus. 82

# T. Office of the People's Counsel

- 48. The Office of the People's Counsel for the District of Columbia ("OPC") filed comments on April 10, 2017, asserting that it is "imperative that the Commission take a holistic approach to developing grid modernization programs and enacting rules through this case, which ... addresses the panoply of issues impacting the District's energy delivery system by being informed through the participation of all relevant stakeholders. <sup>83</sup>
- 49. OPC submits, the Commission must: (1) provide a comprehensive roadmap for grid modernization to make way for efficient, cost effective and inclusive measures/programs; (2) encourage robust stakeholder dialogue and involvement in this proceeding, such that it will be reflective of the needs and desires of all DC communities (including low-income residents) to partake in renewable energy options; and (3) make prudent use of all resources dedicated to pilot projects and initiatives created through this proceeding to ensure equitable/affordable cost recovery for grid modernization.<sup>84</sup> To help achieve these objectives OPC agrees with Commissioner Beverly's recommendation that a MEDSIS working group or stakeholder board be established.<sup>85</sup>
- 50. OPC further asserts that the Commission must first address pending litigation impacting the MEDSIS Proceeding because the issues are very interrelated.<sup>86</sup> OPC also believes that the interconnection issues for all sizes of campus-style Behind Behind-the-Meter Microgrids need to be addressed. OPC also asserts that detailed distributed resource planning will be critical to the success of MEDSIS initiatives.<sup>87</sup> and that the Commission should consider economic aspects, including rate-design, impacts of all MEDSIS Initiatives.<sup>88</sup>

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EGS's Comments.

EGS's Comments at 1.

GOPC's Comments at 2.

OPC's Comments at 2.

OPC's Comments at 2.

OPC's Comments at 13.

OPC's Comments at 15.

OPC's Comments at 15.
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# U. WGL Energy Services, Inc.

- 51. WGL Energy Services, Inc., a retail gas and electricity marketer and WGL Energy Systems, Inc., a provider of design build, energy savings, solar, fuel cell and combined heat and electric plant services (together "WGL Energy") submitted comments on April 10, 2017 supporting the Commission's work with MEDSIS. WGL Energy strongly supports the development and deployment of microgrids in the District as a way to enhance the resiliency and reliability of electric power supplies during macro grid outages as well as a way to economically and reliably serve consumers and businesses during normal weather periods. <sup>89</sup> WGL Energy also supports Commission policies and rules that encourage the deployment of microgrid projects, preserve and foster competitive energy markets in the District and introduce new opportunities for leveraging distributed energy technologies to provide consumers in the District with clean energy services at competitive prices. <sup>90</sup>
- 52. WGL Energy first asserts that localized generation and independent delivery systems allow microgrids to operate independently in Island Mode Operation when the macrogrid is down. WGL Energy goes on to state that the recommended actions in the MEDSIS Report raise issues that the Commission and the parties can address in future rulemakings and proceedings and provided comments on specific recommendations. WGL Energy strongly supports customer choice and believes it has provided significant benefits to consumers and businesses in the District but submits that Commission should recognize that microgrid service is a competitive alternative. Because of its expertise and jurisdiction over regulated electric companies, WGL Energy would support a Commission role for insuring the safety and reliability of private microgrids, while the responsibility for the reliability of the local distribution grid would remain with the utility including requiring the microgrid provider to comply with interconnection standards established by the utility's tariff and to pay appropriate interconnection charges. 92
- 53. WGL Energy further suggests that a licensed retail supplier of renewable microgrid generation would have to comply with the requirements of the District's RPS law, D.C. Code § 34-1431 *et seq.*, and would continue to be required to comply with the Commission's fuel mix and emissions reporting requirements to customers. WGL Energy disagrees that private sector microgrid operators should pay separate assessments for their microgrid operations and activities and does not believe that consumers of services from private microgrid providers would be subject to Commission consumer-protection processes and requirements, but should require a dispute resolution process that may also be agreed to submit to the Commission for review. 94

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WGL Energy's Comments at 4.
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WGL's Comments at 9-10.



<sup>90</sup> WGL Energy's Comments at 4.

<sup>91</sup> WGL Energy's Comments at 6.

<sup>92</sup> WGL's Comments at 8-9.

WGL's Comments at 9.

- 54. WGL Energy asserts that there are clear benefits of having distributed sources of energy, including microgrid generation, provide ancillary services to wholesale electricity markets administered by PJM. Section 4002 of the Small Generator Interconnection Rules (15 D.C.M.R. §4002) currently contains requirements for inverters to protect against the negative impact of two-way power flow between the small capacity generator and the distribution system. These requirements, according to WGL Energy, may serve as the basis for, or complement the development of, standard interconnection procedures that WGL Energy recommended in its MEDSIS workshop comments where it noted that there are no standard interconnection procedures for connecting microgrids or energy storage systems to the larger electric distribution grid in the District.
- 55. WGL Energy believes that in the development of microgrid policies and rules and any pilots, the Commission should not allow electric utility ownership of generation because if the utility could own generation with regulated cost recovery or otherwise recover microgrid generation costs from all distribution customers, competitive providers could not possibly compete with such a structure. WGL Energy submits there is no public policy reason for allowing the electric utility in the District to again own generation and that the Commission should not alter the current construct where the electric utility does not own generation and only provides electric supply as a default service through Standard Offer Service pursuant to competitive wholesale bid procedures that are well-established.<sup>96</sup>
- 56. WGL Energy suggests that the Commission establish a timeframe for the issuance of ATOs that is tracked by the Commission and create a process to mitigate delays either by imposing penalties or using other mechanisms. This process should also govern Pepco service change activities, including interconnection studies, service change requests, performance of service connections, and similar activities as the timely performance of these activities benefits both the private sector microgrid or distributed generation developer and the community at large.

#### V. Potomac Electric Power Company

- 57. On April 10, 2017, Potomac Electric Power Company ("Pepco") filed its comments in strong support of the Commission's MEDSIS vision. Pepco asserts that there are five key concepts that it believes should be incorporated in the Commission's consideration and implementation of the Report.
- 58. First, Pepco suggests that a governance framework that recognizes different levels of regulatory oversight for sustainable DERs is appropriate. Second, the Commission should ensure that the MEDSIS Initiative remains flexible and able to take into account developments

Pepco's Comments at 5-6.



<sup>95</sup> WGL's Comments at 10.

WGL Energy's Comments at 13.

Pepco's Comments.

occurring in other Commission proceedings and existing Pepco projects, as well as the results of early MEDSIS pilot funding and advancements in technologies. Third, as the Commission considers the architecture of the future grid, the Commission should keep in mind that Pepco, with its existing infrastructure and experience, is best situated and qualified to operate and maintain an increasingly complex electrical system for reliability and resiliency, to securely manage two-way communications and distribute key information about system needs, and to administer customer data and key market Platforms. 100

- 59. Next, the Commission should ensure that all users pay their fair share of the costs of maintaining and investing in that system and also ensure that the pricing of electric energy, distribution, transmission, and increasing grid services reflect actual costs and economic value, and encourage the development of new rate structures to ensure fair compensation. Furthermore, Pepco asserts that the Commission must ensure that Pepco is compensated for the true cost of the electric distribution grid and the services provided as Pepco is entitled to fair and timely cost recovery of investments in MEDSIS. Pepco also suggested that the Commission consider the effects of proposals in the context of the District's increased renewable portfolio standard ("RPS") requirements
- 60. In addition to the foregoing general comments made on the Report, Pepco proposes specific comments and recommendations on several issues. Pepco recommends that the Commission address several significant policy questions related to microgrid development, ownership and control and that the Commission should clarify that new rate designs are appropriately considered in a manner that would inform the MEDSIS proceeding, with rate impacts addressed in the evaluation of potential pilot projects. Pepco generally supports the preliminary framework for selecting, implementing and tracking potential pilot projects outlined in the Report, however, it recommends that the Commission adopt Commissioner Beverly's proposal to establish a Stakeholder Advisory Board and ensure that the Stakeholder Advisory Board has the opportunity to provide input.
- 61. In terms of Microgrids, Pepco asserts that a model where it owns, operates and maintains all distribution facilities serving customers within the footprint of an area microgrid would be optimal for advancement of District micro grids in light of its existing infrastructure and regulation by the Commission. Also, to ensure safety and reliability, Pepco believes that both campus and area microgrids should be subject to review and approval under the Commission's small generator interconnection rules or, if applicable, PJM interconnection requirements. Pepco further believes that Campus microgrid customers should be responsible for all costs

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Pepco's Comments at 6.
Pepco's Comments at 7.
Pepco's Comments at 8.
Pepco's Comments at 9.
Pepco's Comments at 25.
Pepco's Comments at 25.
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incurred to construct, interconnect, operate and maintain a campus microgrid, including upgrades to Pepco's distribution system to enable microgrid functionality and similarly, all costs associated with an area microgrid's DER and control systems should be recovered from the microgrid operator and the customers within the microgrid footprint. Pepco goes on to suggest that the Commission consider the extent to which Pepco should be required to invest in distribution system upgrades to supply energy to microgrid customers if microgrid generation is not available when needed and the extent to which all customers, or only microgrid customers, should pay for such upgrades.

- 62. In terms of reliability and customer service, Pepco agrees that the EQSS and the CBOR should apply to microgrid distribution facilities; however, it asserts that data related to area microgrid operations during island mode should be excluded from the calculation of Pepco's reliability performance indices under the EQSS since the level of service provided to customers during such periods will be entirely dependent upon the performance of the microgrid's DER. <sup>106</sup> Furthermore, regardless of the ownership structure, microgrid operators should adhere to the design and safety standards applicable to the current electric distribution system, and those standards should apply to behind-the-meter microgrid infrastructure. <sup>107</sup> Pepco agrees with Staff's conclusion that the Company is not precluded from owning generation and that there is no need for Commission action regarding Pepco's ownership of DERs where the generation from such facilities is used by Pepco to support the reliability of the distribution system.
- 63. In terms of the economic aspects of MEDSIS, Pepco states that the Commission may also want to give consideration to other options, including; Connection Charges, Standby Charges, Time of Use Distribution Rates, Critical or Dynamic Peak Pricing/Incentive Payments. Pepco supports the consideration of alternative rate designs in conjunction with MEDSIS pilot projects, at a minimum and believes that the integration of alternative rate designs with DER technologies should be an important consideration in the Commission's evaluation of potential pilot designs and funding. <sup>108</sup>
- 64. Pepco generally supports Staff's proposed pilot feasibility process and also supports Commissioner Beverly's recommendation to expand stakeholder input in the MEDSIS Initiative by establishing a Stakeholder Advisory Board. Pepco recommends that the Commission should ensure that the Stakeholder Advisory Board has the opportunity to provide input at key stages in the MEDSIS pilot funding process, including: (1) development of the competitive solicitation process; (2) evaluation of pilot proposals and project selection; and (3) ongoing monitoring and evaluation of funded pilot projects.<sup>109</sup>
- 65. Pepco also supports the Report's recommended use of a standard competitive solicitation process as the framework for the MEDSIS pilot funding process however, believes that

Pepco's Comments at 33.



Pepco's Comments at 25.

Pepco's Comments at 27.

Pepco's Comments at 27.

Pepco's Comments at 32.

the Commission should ensure that the pilot funding process is designed to facilitate dialogue between Commission Staff and the Stakeholder Advisory Board and provide the Commission with meaningful and timely recommendations in an efficient manner. In this regard, Pepco proposes that the Commission engage an independent consultant to develop and issue requests for proposals, subject to public review and comment, based on the funding parameters approved by the Commission. <sup>110</sup> With respect to grant eligibility, Pepco recommends that the Commission clarify that Pepco may also apply for MEDSIS pilot project funding independently or in partnership with third parties. <sup>111</sup>

#### W. Georgetown University Department of Energy & Utilities

- 66. On May 5, 2017, Georgetown University ("Georgetown") submitted comments on the Report after having participated in the MEDSIS Town Hall. Georgetown presented its planned microgrid initiatives on campus and identified ways in which it sought to work in support of MEDSIS. Georgetown presented its comments in terms of support or disagreement with previously submitted comments by other parties.
- 67. Georgetown "strongly endorses the comments on Enerblu Grid Services, urging the PSC to rapidly proceed with the pilot project described in the MEDSIS Report and warning that there is nothing to be gained from postponing this vital component of MEDSIS" and further agree with Enerblu's comments that "the grant funding process outlined by the Commission staff already provides for an open and transparent means of project selection, with ample opportunity for stakeholder involvement.<sup>113</sup>
- 68. Georgetown also endorses the comments submitted by the Microgrid Resources Coalition, specifically in terms of procurement services and elaborates on certain suggestions. Georgetown believes it is important to mandate transparency by requiring that the utility publish real time information on grid congestion and sustainability and reliability concerns; to require multiple potential solutions and by considering private sector proposals alongside utility rate-based investments; to establish a local distribution grid market for third party assets to participate in the delivery of capacity and reactive power and to engage market participants by encouraging incremental innovation. Georgetown also asserts that it does not, however, concur with the MRC agreement with the Staff report that aggregated distributed generation and non-contiguous microgrids should be ignored under the MEDSIS initiative because in some instances, it could be useful to the economics and purposes of the overall microgrid initiative to cross a public right of way. 115

Pepco's Comments at 33-34.

Pepco's Comments at 33-34.

Georgetown University's Comments.

Georgetown's Comments at 4.

Georgetown's Comments at 5.

Georgetown's Comments at 5.



69. Georgetown agrees with the MRC and the Report, which notes that "microgrid designs frequently include energy storage components, which may be used to deliver ancillary services to the grid in non-islanded mode" but also with the MRC comments disagreeing with the Report conclusion that "the storage capacity required to provide such ancillary services is likely to be larger than what is required to support islanding of the microgrid." Like MRC, Georgetown does not see a basis for this conclusion. Georgetown also agrees that ancillary service provision is not reliant on energy storage and that other kinds of generation can also participate effectively in ancillary markets and look forward to exploring these technologies in the District. 117

#### X. SunPower's Comments

- 70. On May 1, 2017, SunPower submitted its comments on the Report. SunPower, is a U.S.-based global technology company involved in every step of the solar system supply chain, with over 6,500 employees worldwide the world's highest efficiency solar photovoltaic panel technology, and an extensive national dealer network mostly consisting of locally-owned small businesses. SunPower states that in the District it is developing commercial-scale solar projects in addition to supporting dealer companies actively developing residential and small commercial solar projects. <sup>119</sup>
- 71. Overall, SunPower focused on a NOPR in Attachment E to the Staff Report, specifically, SunPower supports adopting a definition of "Electrical Company" that clarifies that the term expressly excludes any person or entity distributing electricity from a behind-the meter generator to a single retail customer behind the same meter. SunPower believes this will clarify the difference between public utility entities and distributed generation systems. SunPower also agrees with Staff's belief that the term electrical company should not be, nor was "intended to apply to renewable energy providers selling power to a single behind-the-meter customer." Lastly, SunPower asserts that it recognizes that this recommended action would not change the dynamics of the District's renewable energy market, but it does provide legal clarification for renewable energy developers, such as SunPower, who would be interested in financing and building projects in the District. SunPower asserts that the company of the District.

Georgetown's Comments at 8.
Georgetown's Comments at 8.
SunPower's Comments at 1.
SunPower's Comments at 1.
SunPower's Comments at 1.
SunPower's Comments at 1.
SunPower's Comments at 2.
SunPower's Comments at 2.



# **B.** Summary of Reply Comments

#### A. The GridWise Alliance

- 72. On May 10, 2017, The GridWise Alliance ("GridWise") submitted reply comments to the MEDSIS Staff Report with several recommendations. <sup>123</sup> GridWise points out the need for the Commission to identify its goals and objectives of its grid modernization evolution at the outset of this process and in addition, goals should then be aligned with policy objectives and rate structures and other components of this overall process which will help achieve results and avoid unintended consequences and help maintain a reliable and secure grid. <sup>124</sup> GridWise also expresses that having a framework in place that clarifies principles and goals is critical and short, medium-, and long-term planning also are essential in developing the path forward, as is an open platform grid architecture that can accommodate a range of technologies and capabilities. <sup>125</sup> GridWise suggests that developing and implementing metrics to measure and verify progress toward achieving established goals are important, as well.
- 73. GridWise asserts that costs incurred to transform to an integrated, modern grid, and to maintain the grid, should be "allocated and recovered responsibly, efficiently, and equitably;" and, policy and regulatory frameworks should be developed to achieve these objectives. Such models should take into account: market structure, regulatory barriers, and other such key considerations. GridWise supports a gradual transition to more dynamic rates, though urges a move toward more dynamic rates as soon as is practicable for that portion of customers for which it makes sense to do so. Also, GridWise believes that Time-of-Use rates should be flexible enough to accommodate changing characteristics of supply and demand over time and that both effective customer education and transparency will be critical to the success and adoption of any new rate structures. Furthermore, GridWise has developed policy principles that also represent a consensus of the cross-section of its membership, from which are drawn the following that pertain to rate design.

#### B. Constellation Companies and Exelon Generation Company, LLC

- 74. On May 10, 2017, Constellation/ExGen filed its Reply Comments in response to Comments filed on the Report. In their reply comments, Constellation/ExGen reaffirms its positions on the issues raised in its Initial Comments and seeks only to reply to certain related comments.
- 75. First, Constellation/ExGen seeks to reply to comments concerning proposed eligibility requirements for participation in the MEDSIS Pilot Program Fund procurement process that would unnecessarily prevent the program from reaching its full potential by restricting

GridWise's Comments at 3.



GridWise's Reply Comments at 1.

GridWise's Comments at 2.

GridWise's Comments at 2

affiliates of utilities from participating. 127 Constellation/ExGen reiterates that the Code of Conduct governing utilities and their affiliates is in place to ensure a level playing field between utility affiliates and other market participants. And regarding the MEDSIS Grant Pilot Program, "because the Staff Report anticipates that the Commission, with the assistance of an advisory board, (and not the utility) will select the MEDSIS Pilot Project grant recipients, and selection criteria and parameters for a procurement process have been outlined, there is no rational basis to exclude participation by affiliates."128

Second, Constellation/ExGen highlighted in its Initial Comments the need for 76. further stakeholder deliberation with regard to how to ensure that consumers can experience the benefits of microgrids without frustrating the intent of the District's retail choice mandate. Therefore, Constellation/ExGen asserts that determining policies to further microgrid development in the context of the District's competitive market mandate will be necessary as the Commission considers how best to categorize and oversee microgrid development in the District. 129

#### C. WGL Energy Services, Inc.

- On May 10, 2017, WGL Energy filed its Reply Comments in response to 77. Comments filed on the Report. 130 WGL Energy reiterated that it supports the Staff's Recommendation that the Commission establish a robust stakeholder engagement process to identify and resolve the many issues that grid modernization will raise. WGL Energy believes a Stakeholder Advisory Board is a sound mechanism to provide input to the Commission on important issues and that the Commission can resolve issues on which a consensus cannot be reached and the Stakeholder Advisory Board can facilitate consensus where possible and identify non-consensus issues for the Commission to resolve in a timely manner. 131
- Given the wide-ranging unresolved issues indicated in the parties' comments, WGL Energy agrees with Grid 2.0 and others that pilot programs for microgrids are premature at this time as there is no MEDSIS vision for formulating valid pilot programs and furthermore agrees that the Commission should hold off on pilot programs until the stakeholder collaborative can weigh in on the parameters of the programs. <sup>132</sup> Also, MRC submitted comments encouraging the Commission to explore regulatory frameworks that will foster microgrid development and other DER and MRC supports a core proceeding to address the foregoing. WGL Energy supports MRC's position and believes that institution of the NOPRs recommended by Staff and a stakeholder process is consistent with MRC's position. WGL Energy also supports a stakeholder

WGL Energy's Reply Comments at 10.

Constellation/ExGen's Reply Comments at 2.

<sup>132</sup> WGL Energy's Reply Comments at 13.



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<sup>128</sup> Constellation/ExGen's Reply Comments at 2. 129 Constellation/ExGen's Reply Comments at 4. 130 WGL Energy's Reply Comments. 131

integrated distribution system planning process that will enable Pepco to account for DER and non-wires projects that the market will bring to the District. <sup>133</sup>

- 79. WGL Energy agrees with Pepco's actions to modernize its distribution grid. WGL also agrees with MRC that the potential benefits of microgrids far outweigh potential negative impacts. Importantly, the electric utility can identify and resolve any potential negative impacts of microgrids, just as it does now when connecting behind the meter renewable generation to the grid today, if reasonable microgrid interconnection rules and procedures are adopted. WGL Energy agrees that microgrid development should not adversely affect the Commission's successful retail choice program but that the definitions of an electric company and an electricity supplier should facilitate the advancement of microgrids with potential sales to multiple customers in the District, consistent with WGL Energy's prior comments. 135
- 80. In its comments, Pepco asserts that the Commission's Electricity Quality of Service Standards ("EQSS") and the Consumer Bill of Rights should apply to microgrid distribution facilities in front of the customer's retail meter and WGL Energy does not fully agree with these views. WGL Energy believes that the EQSS performance metrics just do not work for a microgrid serving significantly smaller customer bases, and therefore those metrics would require a substantial re-working to be equitably applied to such smaller systems.
- 81. WGL Energy does not support Staffs recommendation that unproven technology be excluded from pilot programs. Nor does WGL Energy support limiting the corporate structures that can provide these benefits. Any concerns that the Commission may have about cross subsidization or financial capabilities can be addressed through other regulatory approaches such as affiliate codes of conduct. Furthermore, WGL Energy sees no reason to exclude energy efficiency projects within the context of grid modernization. WGL Energy does not support the exclusion of electric utility affiliates from pilot programs. <sup>137</sup>

#### D. Potomac Electric Power Company

82. On May 10, 2017, Pepco filed its Reply Comments in response to Comments filed on the Report. Pepco first discusses the proposals by several Commenters for additional stakeholder processes, the usefulness of the key concepts set forth in Pepco's April 10 initial comments in assessing future MEDSIS developments and then responds to specific issues in the Staff Report addressed by Commenters.

WGL Energy's Reply Comments at 14.
 WGL Energy's Reply Comments at 21.
 WGL Energy's Reply Comments at 22.
 WGL Energy's Reply Comments at 23.
 WGL Energy's Reply Comments at 26.
 Pepco's Reply Comments.



- 83. Pepco reasserts that initiating another stakeholder process creates significant risk of further delay in achievement of the purposes of MEDSIS already established by the Commission. Pepco believes that the Report provides the right approach to advancing the MEDSIS Initiative as the expedited notice and comment rulemaking process and detailed pilot program developed by Staff-combined with the MEDSIS pilot funding created through the Exelon-PHI Merger will accelerate the deployment of actual projects that can provide "real world" data and "proof of concept" evidence, which all stakeholders can build upon. Pepco supports creation of a Stakeholder Advisory Board, with participation by community groups and specific responsibilities regarding recommendations for MEDSIS pilot program criteria and project selection, and suggests that in making recommendations regarding the MEDSIS pilot program, the Stakeholder Advisory Board should be free to consider all issues pertaining to the pilots. 140
- 84. In its initial comments, Pepco identified six key concepts that various Commenters agree on the importance of many (if not all) of these key concepts, and therefore Pepco believes that those concepts should be adopted by the Commission. The six key concepts are (1) Application of different levels of regulatory oversight based on DER characteristics is appropriate; (2) The MEDSIS Initiative should remain flexible; (3) Core functions of the distribution system should remain with Pepco as the electric utility; (4) All users of the electric distribution system should pay their fair share of costs; (5) Pepco is entitled to fair and timely cost recovery of investments in modernizing the electric grid and implementing MEDSIS; and (6) Compliance with renewable portfolio standard ("RPS") requirements as MEDSIS advances. <sup>141</sup> Pepco believes that the key concepts identified can serve as useful criteria for use by the Commission and other stakeholders in the course of the MEDSIS Initiative in evaluating the merits of pilot projects and potential changes to the Commission's regulations. <sup>142</sup>
- 85. Pepco believes that it is appropriate for the Commission to provide some guidance in MEDSIS on microgrid issues for the MEDSIS pilot process and for those stakeholders who are considering the development of microgrids within the District. Pepco asserts that the Commission should support the development of public-purpose microgrids by Pepco in which both utility and third-party owned DERs can participate and in addition, the Commission should consider establishing acceptable parameters of service agreements between customers and microgrid operators in which the parties negotiate commercial terms for micro grid end-use services and address Pepco requirements.<sup>143</sup>
- 86. In regard to the economic aspects of MEDSIS, Pepco believes that concern regarding the absence of MEDSIS cost data, is premature and Pepco expects that the Commission will need to take affirmative steps to properly allocate the costs of grid modernization among

Pepco's Reply Comments at 16.



Pepco's Reply Comments at 6.

Pepco's Reply Comments at 7.

See Pepco's Comments at 5-10.

Pepco's Reply Comments at 10.

customers through new rate options that reflect the full cost of a customer's use of the distribution system, which will be best addressed in future proceedings. 144

- 87. On April 17, 2017, OPC released a "Value of Solar" ("VOS") study for the District, and while Pepco has not reached conclusions regarding the OPC VOS study, Pepco asserts that the Commission's analysis must include not only the value of solar but also a comparison of that value to the value that can be achieved through advanced grid infrastructure, energy efficiency, and other DER as well as more granular consideration of equitable allocation among communities and customers with varying levels of impediments to DER deployment. Pepco encourages the Commission to establish a schedule for comments on the OPC VOS study as part of MEDSIS, including a technical conference in which OPC's calculations and assumptions can be examined in detail before comments are submitted to the Commission. 145
- 88. Pepco agrees with the Commission's MEDSIS Pilot Funding Process as is currently and therefore asserts that the Commission should refrain from adopting any limitations on the pilot process at this stage of the MEDSIS initiative. Pepco believes that further consideration of distribution system planning and modeling processes as well as revisions to interconnection regulations should await the Commission's resolution of those issues in other proceedings.<sup>146</sup>

# E. DC Climate Action

- 89. On May 10, 2017, DCCA submitted reply comments in response to Comments filed on the Report. In regard to the Multi-Party Stakeholder process, DCCA wishes to emphasize "that this multi-party stakeholder group would develop governing principles with which 'concepts' such as those enumerated by Pepco in their Comments' and that the working group would help to ensure that best practices in other jurisdictions are given full consideration for adaptation to the District's circumstances. <sup>147</sup>
- 90. DCCA agrees with the concern of OPC in its initial comments on the Report, regarding the possibility of inadequate consumer protections should the Commission employ light touch regulation to facilitate rapid deployment of DERs in the District, and suggests that this possibility would have to be examined carefully along with potential protections. DCCA also agrees with OPC, that "'detailed distributed resource planning will be critical to the success of MEDSIS initiatives' and that 'the criteria used for analysis of the electric grid capacity with DER [is] a critical issue moving forward." DCCA believes that these criteria should be established by the stakeholder group. 149

Pepco's Reply Comments at 19.
Pepco's Reply Comments at 20.
Pepco's Reply Comments at 23.
Pepco's Reply Comments at 23.
DCCA's Reply Comments at 1.
DCCA's Reply Comments at 2.
DCCA's Reply Comments at 2.



91. DCCA asserts that to permit broad participation in the planning and development of DERs including microgrids, access to data by stakeholders is crucial, and DCCA agrees with the DCG's comments regarding data sharing. It also supports the opinion articulated by Georgetown in its Comments expressing that the Commission should mandate transparency and making existing and potential value streams available to the public to ensure competition on an equal playing field between third parties and public utilities. Furthermore, DCCA believes that issues relating to the modernization of gas distribution systems (for natural gas, renewable methane) were underdeveloped in the Staff Report.

#### C. Additional Comments filed in MEDSIS Docket

Commission Staff notes that the following comments were also filed in the MEDSIS docket after the closing of the comment period on the MEDSIS Staff Report:

- September 6, 2017 Comments of Raymond Nuesch on behalf of Community Power Network. In his comments, Mr. Nuesch urged the Commissioners to "move ahead with the MEDSIS process so that all D.C. ratepayers can benefit from a low-cost, reliable, and renewable energy system." Mr. Nuesch further asserted that "[t]he MEDSIS proceeding is our opportunity to develop an electric grid that benefits everyone in D.C." and that he is "disappointed that to date, so little has come from the process," noting that "[t]he Commission has committed to a process to re-write the rules of the grid, but so far [has] failed to deliver on that promise." Mr. Nuesch concludes: "It is time for the Commission to initiate a stakeholder process to establish rules, working groups, and a completion deadline that will more the process forward." <sup>151</sup>
- September 8, 2017 Joint Comments of DC Consumer Utility Board ("DC CUB") and GRID2.0 Working Group ("Grid2.0") filed in FC1130 and FC1144. DC CUB and Grid2.0 assert that with "the Notice of Construction (NOC) detailed in FC 1144 it would appear that Pepco is not able to wait until a resolution of FC 1130 (MEDSIS) . . . Pepco's proposed \$420M investment in the electric distribution grid will guarantee rate increases for DC rate-payers for some years to come. Neither the Commission nor smartgrid advocates are well positioned at this time to know what percentage of Pepco's proposed capital grid project might have been met more efficiently by smartgrid strategies such as demand-side management and distributed energy resources." DC CUB and Grid2.0 goes on to assert, "[a]lthough the NOC by Pepco doesn't completely obviate the utility of MEDSIS, it does successfully set aside any value that might flow from it in the near term . . . This is in some measure the result of the Commission's very slow response to the challenge of smartgrid technology." DC CUB and GRID2.0 recommend the idea

<sup>151</sup> Community Power Network's Comments, filed September 6, 2017.



DCCA's Reply Comments at 3.

proposed by Commissioner Beverly to establish a "stakeholder committee to explore consensus options for advancing MEDSIS . . .[should] be employed to aid in defining how best to shape the 1130 RFP for smartgrid pilots." DC CUB and Grid2.0 conclude that "FC 1144 would need to be suspended until the completion of the 1130 stakeholder and pilot project" process. <sup>152</sup>

- September 28, 2017 Comments of Mr. Glenn Griffin urging the Commission "to move ahead with the MEDSIS process so that all D.C. ratepayers can benefit from a low-cost, reliable, and renewable energy system. Mr. Griffin further asserted that "[t]he MEDSIS proceeding is our opportunity to develop an electric grid that benefits everyone in D.C." and that he is "disappointed that to date, so little has come from the process," noting that "[t]he Commission has committed to a process to re-write the rules of the grid, but so far [has] failed to deliver on that promise." Mr. Griffin concludes: "It is time for the Commission to initiate a stakeholder process to establish rules, working groups, and a completion deadline that will more the process forward." <sup>153</sup>
- October 10, 2017 Comments of Mr. Roger Horton and Mr. Daniel Woodward urging the Commission "to move ahead with the MEDSIS process so that all D.C. ratepayers can benefit from a low-cost, reliable, and renewable energy system. Mr. Horton and Mr. Woodward further assert that "[t]he MEDSIS proceeding is our opportunity to develop an electric grid that benefits everyone in D.C." and that they are "disappointed that to date, so little has come from the process," noting that "[t]he Commission has committed to a process to re-write the rules of the grid, but so far [has] failed to deliver on that promise." Mr. Horton and Mr. Woodward conclude: "It is time for the Commission to initiate a stakeholder process to establish rules, working groups, and a completion deadline that will more the process forward." <sup>154</sup>

Mr. Horton and Mr. Woodward's Comments, each filed October 10, 2017.



Comments of DC CUB and GRID2.0, filed September 8, 2017.

Glenn Griffin's Comments, filed September 28, 2017.