

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

STAFF PROPOSED OPINION AND ORDER

August 2, 2019

**FORMAL CASE NO. 1130, IN THE MATTER OF THE INVESTIGATION INTO
MODERNIZING THE ENERGY DELIVERY SYSTEM FOR INCREASED
SUSTAINABILITY, Order No. 19984**

Before the Commission:

Willie L. Phillips, Chairman
Richard Beverly, Commissioner
Greer Gillis, Commissioner

STAFF PROPOSED OPINION & ORDER

Given the unprecedented interest in this proceeding, and comments by public witnesses at the June 13, 2019, MEDSIS Townhall Meeting, the Commission issues this Order as a proposed Decision for comment by all interested persons. The Commission will consider any additional comments before reaching a final Decision. Therefore, the final Decision may differ from the proposed Decision, it does not establish any precedent, and does not necessarily represent the Commission's final conclusions. Interested persons have 45 days and 60 days from the date of this proposed Decision's release to file initial and reply comments, respectively.



OVERVIEW

By this order, the Commission is proud to announce the launch of a new name and logo for the next phases of grid modernization in the District of Columbia: “PowerPath DC.”



PowerPath DC reflects our vision for grid modernization and will replace MEDSIS. The goals of PowerPath DC include ensuring that our energy delivery system remains safe, reliable, and affordable while also becoming more sustainable, interactive, and secure. These goals are linked to the District of Columbia’s energy and climate action policies as articulated in the Clean Energy DC Plan. Indeed, the District is positioned as a national leader in sustainability and environmental conservation, with the most aggressive renewable energy standards in the country, and has leadership dedicated to combating the effects of global climate change and realizing a clean energy future.

As the utility regulator, we embrace our important role in helping the District achieve a clean energy future and we believe that several of the directives stemming from this Order will yield tangible near- and long-term benefits for District residents and ratepayers.

In this Overview, we highlight what we find to be the most substantial outcomes from our review the Final MEDSIS Working Group Report, including: (1) a more transparent distribution system planning process, (2) improved customer data access, with a new website for competitive energy suppliers and expansion of Green Button Connect My Data; (3) a \$21.5 million Pilot Projects program for innovative projects; and (4) proposed definitions for “Non-Wires Alternative” and “Advanced Inverter.”

The Commission believes that our approval of these recommendations demonstrates our commitment to serving the needs of District ratepayers, while ensuring the future grid is planned collaboratively with the flexibility needed to accommodate innovation.

COLLABORATIVE SYSTEM PLANNING

First, we emphasize collaborative system planning. The Commission approves the implementation of a more open and transparent distribution system planning process.

We approve the creation of secured utility web portals to enhance third-party data access to utility information and to facilitate the PowerPath DC Pilot Projects. This new planning process will

consider input from stakeholders on Pepco's load forecasting methodology and non-wire alternatives to traditional infrastructure improvements. The Commission believes that the approved process will help spur distributed energy resource integration and reduce costly utility infrastructure spending by feasibly replacing traditional upgrades with lower-cost, socially beneficial clean energy sources.

CUSTOMER FOCUSED

Second, we approve the creation of a new enhanced website to host up-to-date competitive energy supplier offers, as well as energy education materials, to aid customers in evaluating energy offers and switching to competitive energy suppliers. The District made clear its commitment to fostering competition in the supply of energy when it adopted the 1999 Retail Electric Competition and Consumer Protection Act. We hope that this central website will help facilitate residential retail energy choice from more clean and affordable energy sources.

The Commission also directs Pepco to investigate the expansion of Green Button Connect My Data, an industry-wide effort to provide customers with easy access to their usage data, to residential customers in the District. We strongly believe that giving residential customers access to their data will foster innovation, encourage energy usage reduction, and advance our goals of empowering consumers and making the system more interactive.

INNOVATION DRIVEN

Third, we encourage innovation. By this Order, we commence Phases 3 and 4 of the MEDSIS Initiative, now known as PowerPath DC. Phase 3 encompasses the implementation of the approved recommendations from the Final MEDSIS Working Group Report, which we envision will occur over the next year. Phase 4 is the Pilot Projects phase wherein the Commission will approve for MEDSIS funding proposed pilots based on recommendations from the Governance Board formed by this Order. More specifically, the Commission approves the use of a two-phase selection process which includes a broad Call for Papers and the issuance of industry-wide requests for proposals.

The Commission recognizes that it has been a long road to arrive at this step in the pilot projects process, but we believe that the approved process will facilitate the speedy and efficient submission and selection of pilots; the first of which we hope will be deployed by 2021. We also believe the approved screening process and selection criteria will result in the deployment of projects that advance the District's energy policies, providing direct and tangible benefits for District ratepayers and the environment.

PROPOSED DEFINITIONS

The Order also contains a proposed Notice of Proposed Rulemaking ("NOPR") at Appendix E that includes the definitions "Advanced Inverter" and "Non-Wires Alternative." Under Commission rules, to formally adopt these definitions we must issue a NOPR, and the Commission directs that Commission Staff finalize the NOPRs within 180 days. The reason why the NOPR is required is to allow all stakeholders time to seek reconsideration or clarification. We will issue the NOPR after that period closes.

NEXT STEPS

Over the next five to ten years, the Commission expects great strides to be made in the District's grid modernization efforts, including:

- The integration of more non-wire alternatives through Pepco's improved distribution system planning process;
- The deployment of more distributed energy resources on the distribution system from improved interconnection processes;
- Leveraging the lessons-learned from the Pilot Projects approved in Phase 4 of the MEDSIS Initiative;
- The expansion of electric vehicle and electric transportation enabling infrastructure;
- Greater data access by customers and third-parties to enable targeted energy usage reduction measures, increased distributed energy resource deployment, and alternative technological advancements;
- The implementation of new building codes and energy efficiency standards that incentivize energy usage reduction for residential ratepayers in master-metered apartment buildings; and
- The expansion and/or refinement of the Commission's jurisdiction over grid modernization-related matters.

As we move forward into PowerPath DC, the Commission remains committed to meaningfully engaging stakeholders. While the Commission intends to remain engaged and proactive, we must also recognize that limitations on our ability to act on several of the proposed recommendations is a product of clear legislative constraints on our authority, even if unintended. That being said, we will continue to work within our legislatively given powers to advance grid modernization and the District's energy goals. We will also work in collaboration with the Council of the District of Columbia to remove regulatory barriers to grid modernization, which is key to successfully implementing many of the recommendations proposed in the Final MEDSIS Working Group Report.

Finally, we commit to utilizing the MEDSIS Vision and Guiding Principles and considering the District's clean energy goals and environmental protection policies to inform our decision-making when it comes to the District's energy delivery system. As evidenced by the many directives coming out of this Order, there is a lot of forward-thinking work on the horizon for grid modernization in the District.

The Commission would like to thank the many stakeholders that participated in the MEDSIS Initiative. We recognize that the impetus of this Initiative was two-fold. First, the stakeholders wanted to ensure that the Commission acted proactively by consciously planning the grid of the future and holding our utilities to high standards. Second, the stakeholders wanted to address the negative long-term impact of a business-as-usual approach to system planning. We also recognize the value of your time and your contribution towards ensuring that we continue to move in the right direction on grid modernization.

TABLE OF CONTENTS

| | | |
|-------------|--|----------|
| I. | INTRODUCTION | 1 |
| II. | BACKGROUND | 5 |
| A. | Procedural History | 5 |
| B. | Overview of Phase 2: MEDSIS Working Group Process..... | 7 |
| III. | DISCUSSION | 9 |
| A. | Working Group 1 – Data and Information Access and Alignment (DIAA)..... | 9 |
| 1) | DIAAWG R-5.1.1: Commission to Explore Metric for Evaluating Carbon Footprint Impact of DER Projects..... | 9 |
| 2) | DIAAWG R-5.1.2: Commission to Develop Benefit Cost Analysis (BCA) Methodology | 10 |
| 3) | DIAAWG R-5.1.3: Commission to Align MEDSIS with Clean Energy DC Act | 12 |
| 4) | DIAAWG R-5.1.4: Commission to Continue to Improve Small Generator Interconnection Process..... | 13 |
| 5) | DIAAWG R-5.1.5: Commission to Revise Language in MEDSIS Vision Statement . | 14 |
| 6) | DIAAWG R-5.1.6: Commission to Develop Publicly Available System-Level Data Webpage..... | 15 |
| 7) | DIAAWG R-5.1.7: Commission to Direct Pepco to Update Hosting Capacity Maps on a Monthly Basis..... | 17 |
| 8) | DIAAWG R-5.1.8 and L-5.1.10: Commission to Direct Pepco to create a Secure Web Portal for RFP Responses and Programmatic Data Requests | 17 |
| 9) | DIAAWG R-5.1.9: Apply MEDSIS Guiding Principle Metrics to General Commission Decision Making | 19 |
| B. | Working Group 2 – Non-Wires Alternatives (NWA) to Grid Investments..... | 21 |
| 1) | NWA R-5.2.1: Commission to Establish an NWA Definition | 21 |
| 2) | NWA R-5.2.2: Commission to Establish NWA Classifications..... | 22 |
| 3) | NWA R-5.2.3: Commission should Order Stakeholder-Informed Distribution System Planning (DSP) and NWA Consideration Process..... | 23 |
| 4) | NWA R-5.2.4: Commission to Establish Advanced Inverter Definition..... | 26 |
| 5) | NWA L-5.2.5: Stakeholder Input on Commission Rules Around DER Ownership | 27 |
| 6) | NWA L-5.2.6: Need for Demonstrating NWA Projects in the District..... | 28 |
| 7) | NWA R-5.2.7: Commission to Establish Stakeholder Working Group on IEEE 1547-2018 Standards and Advanced Inverter Deployment..... | 28 |

| | | |
|--------------------|--|------------|
| C. | Working Group 3 – Rate Design | 30 |
| 1) | RDWG R-5.3.1: Commission to Reconvene Residential Dynamic Pricing Program Working Group..... | 30 |
| 2) | RDWG R-5.3.2: Commission to Initiate a Value of DER and Value of Grid Study.... | 31 |
| 3) | RDWG L-5.3.3: Performance Based Regulation in the District..... | 32 |
| D. | Working Group 4 – Customer Impact | 33 |
| 1) | CIWG R-5.4.1: Commission to Enhance and Consolidate Customer Education Materials..... | 33 |
| 2) | CIWG R-5.4.2: Commission to Consolidate and Enhance Competitive Energy Supplier Information for District Customers | 34 |
| 3) | CIWG R-5.4.3: Commission to Work with Pepco to Enhance Customer Data Access and Protection..... | 35 |
| 4) | CIWG R-5.4.4: Commission to Direct Pepco to Develop Energy Efficiency Programs for Master Metered Apartments | 37 |
| 5) | CIWG R-5.4.5: Commission to Enhance Customer Participation in Low- Income Programs..... | 38 |
| 6) | CIWG R-5.4.6: Commission to Revise the CBOR to Support the MEDSIS Pilot Projects Phase..... | 40 |
| 7) | CIWG L-5.4.7: Opportunity for Resilience Hubs in the District..... | 41 |
| 8) | CIWG R-5.4.8: Commission to Ensure Connection Between Customers’ Energy Usage and their Environment Impact | 42 |
| E. | Working Group 5 – Microgrids | 43 |
| F. | Working Group 6 – Pilot Projects..... | 45 |
| 1) | PPWG R-5.6.1: Commission to Implement Pilot Exclusion Criteria to Pilot Project Selection Process | 45 |
| 2) | PPWG R-5.6.2: Commission should Implement a Pilot Project Selection Process with Two Step Screening..... | 49 |
| 3) | PPWG R-5.6.3: Commission to Adopt Grant Funding Qualification Parameters for Pilot Projects..... | 51 |
| 4) | PPWG R-5.6.4: Commission to Implement a Pilot Projects Governance Model..... | 51 |
| IV. | NEXT STEPS – POWERPATH DC..... | 53 |
| | THEREFORE, IT IS ORDERED THAT:..... | 53 |
| APPENDIX A: | CLEAN ENERGY DC OMNIBUS AMENDMENT ACT OF 2018 COMMISSION SPECIFIC DIRECTIVES..... | A-1 |
| APPENDIX B: | REVISED MEDSIS VISION STATEMENT | B-1 |
| APPENDIX C: | NON-EXHAUSTIVE LIST OF PILOT PROJECT CONCEPTS AND GOALS | C-1 |

| | |
|--|------------|
| APPENDIX D: TECHNOLOGY READINESS LEVEL (TRL) SCORING QUESTIONNAIRE | G-1 |
| APPENDIX E: DRAFT NOTICE OF PROPOSED RULEMAKING..... | E-1 |
| APPENDIX F: INFORMATION REQUEST TO PEPCO ON GREEN BUTTON CONNECT MY DATA..... | F-1 |

TABLES & FIGURES

| | |
|--|-----------|
| Table 1: Directives and Implementation Time Frame | 1 |
| Table 2: Technology Readiness Levels Descriptions | 48 |
| Figure 1: MEDSIS Procedural Timeline | 6 |
| Figure 2: MEDSIS Participation Breakdown | 8 |
| Figure 3: Proposed Distribution Planning and NWA Consideration Process (as of February 2019)..... | 24 |
| Figure 4: DOE Technology Readiness Level Matrix | 47 |
| Figure 5: Pilot Projects Governance Board Structure | 52 |

I. INTRODUCTION

1. By this Order the Public Service Commission of the District of Columbia (“Commission”) renders its decision on the recommendations and learnings submitted by stakeholders in the Final MEDSIS Working Group Report (“Final WG Report”) filed on May 31, 2019.¹ Below is a Table that identifies the Commission’s directives and implementation time frame respective to each approved recommendation or learning as well as the pages within this Order on which the decision is rendered and the corresponding ordering paragraphs.²

Table 1: Directives and Implementation Time Frame

| ORDER NO. 19984 – DIRECTIVES IMPLEMENTATION TIME FRAME ³ | | | | | |
|---|--|--|----------------------|--------------------|-------------------|
| | Recommendation or Learning | Directive | Decisional Paragraph | Ordering Paragraph | Party Responsible |
| 30 DAYS | 5.4.1 - Enhance and Consolidate Customer Education Materials | Office of Consumer Services to submit an implementation Action Plan | 69 | 128 | Commission Staff |
| | 5.4.4 EE Programs for MMA Buildings | Issue an NOI on lifting the Commission’s 1928 ban on residential submetering | 79 | 129 | Commission Staff |

¹ *Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability (“Formal Case No. 1130”)*, Final Report v1.0 of the DCPSC MEDSIS Stakeholder Working Groups, filed May 31, 2019 (“Final WG Report”). Recommendations consist of concepts, actions, programs, initiatives, or projects that have been fully vetted by the Working Groups and were defined with specificity or with sufficient detail to be actionable by the Commission. Learnings, on the other hand, are concepts, actions, programs, initiatives, or projects discussed by the Working Groups but for which there was not enough detailed information to make a recommendation. Final WG Report at 7.

² Recommendations consist of concepts, actions, programs, initiatives or projects that have been fully vetted by the working group and were defined with specificity or with sufficient detail to be actionable by the Commission. Learnings, on the other hand, are concepts, actions, programs, initiatives, or projects discussed by the working group but for which there was not enough detailed information to make a recommendation. Final Report at 7.

³ Recommendations not reflected in this Chart are either still under consideration or have been denied as described in further detail in this Order.

| ORDER NO. 19984 – DIRECTIVES IMPLEMENTATION TIME FRAME ³ | | | | | |
|---|--|---|----------------------|--------------------|--------------------------|
| | Recommendation or Learning | Directive | Decisional Paragraph | Ordering Paragraph | Party Responsible |
| | 5.4.8 - Ensure Connection Between Customers’ Energy Usage and their Environmental Impact | File report on the feasibility of including the carbon footprint metric on customers’ home energy usage reports | 91 | 137 | Pepco; Washington Gas |
| | 5.6.4 - Implement a Pilot Projects Governance Model | Convene the first meeting of the Pilot Projects Governance Board | 109 | 146 | Commission Staff |
| 60 DAYS | 5.1.6 - Develop Publicly Available System-Level Data Webpage | Update website and file report detailing updates. | 25 | 115 | Pepco |
| | 5.1.6 - Develop Publicly Available System-Level Data Webpage | Update website or file feasibility explanation | 26 | 115 | Washington Gas |
| | 5.2.3 - Stakeholder-Informed DSP and NWA Consideration Process | File an accelerated DSP implementation plan | 49 | 119 | Pepco |
| | 5.3.1 - Reconvene a Working Group to Develop a Specific Residential Dynamic Pricing Program | File strawman Dynamic Pricing proposal | 63 | 125 | Pepco |
| | 5.4.6 - Revise the CBOR to Support the MEDSIS Pilot Projects Phase | Reconvene the CBOR working group | 85 | 134 | Commission Staff |

| ORDER NO. 19984 – DIRECTIVES IMPLEMENTATION TIME FRAME ³ | | | | | |
|---|---|--|--|--------------------|--------------------------------|
| | Recommendation or Learning | Directive | Decisional Paragraph | Ordering Paragraph | Party Responsible |
| | 5.4.8 - Ensure Connection Between Customers’ Energy Usage and their Environmental Impact | Issue Order on implementation of joint Home Energy Report and/or Carbon Footprint Report | 91 | 137 | Commission |
| 90 DAYS | 5.1.7 - Direct Pepco to Update Hosting Capacity Maps on a Monthly Basis | Commence monthly updates to hosting capacity maps on website | 28 | 116 | Pepco |
| | 5.2.3 - Stakeholder-Informed DSP and NWA Consideration Process | File revised DSP process | 48 | 119 | Pepco |
| | 5.2.5 - Stakeholder Input on DER Ownership Rules | Issue an NOI on DER ownership | 54 | 120 | Commission Staff |
| | 5.3.1 - Reconvene a Working Group to Develop a Specific Residential | Comments filed on Pepco’s Dynamic Pricing proposal | 63 | 124 | Public/Interested Stakeholders |
| | 5.3.1 - Reconvene Residential Dynamic Pricing Working Group | Public Notice convening the Dynamic Pricing Working Group | 63 | 125 | Commission Staff |
| | 5.4.5 - Enhance Customer Participation in Low-Income Programs | Develop Action Plan on Enhanced Customer Participation in Low-Income Programs | 83 | 133 | Commission Staff |
| | 120 DAYS | 5.1.8 - Create a Secure Web Portal for RFP Responses and Data Requests | Report on the Status of creating secure web portals and non-disclosure agreement processes | 31 | 117 |
| 5.2.7 - Stakeholder Working Group Around IEEE 1547-2018 Standards and Advanced Inverter Deployment | | Evaluate status of implementing IEEE 1547-2018 standards and hold first educational workshop | 59 | 123 | Commission Staff; Pepco |

| ORDER NO. 19984 – DIRECTIVES IMPLEMENTATION TIME FRAME ³ | | | | | |
|---|---|--|----------------------|--------------------|--------------------|
| | Recommendation or Learning | Directive | Decisional Paragraph | Ordering Paragraph | Party Responsible |
| | 5.4.1 - Enhance and Consolidate Customer Education Materials | Approved updates to the Commission’s website implemented | 69 | 128 | Commission Staff |
| 180 DAYS | 5.2.1 - Establish an NWA Definition | Finalize Proposed Notice of Proposed Rulemaking included at Appendix E | 40 | 118 | Commission Staff |
| | 5.2.1 - Establish an Advanced Inverter Definition | Finalize Proposed Notice of Proposed Rulemaking included at Appendix E | 51 | 118 | Commission Staff |
| | 5.4.2 - Enhance and Consolidate Competitive Energy Supplier Information | Develop micro-website to host up-to-date competitive energy supplier offers/energy education material and design a marketing campaign to publicize new website | 73 | 130 | Commission Staff |
| | 5.4.3 - Enhance Customer Data Access and Protection | Report on the implementation of the Green Button Connect My Data as outlined in Appendix F | 76 | 131 | Pepco |
| | 5.4.5 - Enhance Customer Participation in Low-Income Programs | Office of Consumer Services create consolidated low-income program offerings list on the Commission’s website | 82 | 132 | Commission Staff |
| | 5.4.6 - Revise the CBOR to Support the MEDSIS Pilot Projects | RM3 CBOR WG submit initial recommendations to the Pilot Projects Governance Board for review | 85 | 135 | CBOR Working Group |
| 240 DAYS | 5.4.6 - Revise CBOR Rules to Support MEDSIS Pilot Projects | RM3 CBOR WG submit its final recommendations to the Commission, including a proposed NOPR | 85 | 135 | CBOR Working Group |

II. BACKGROUND

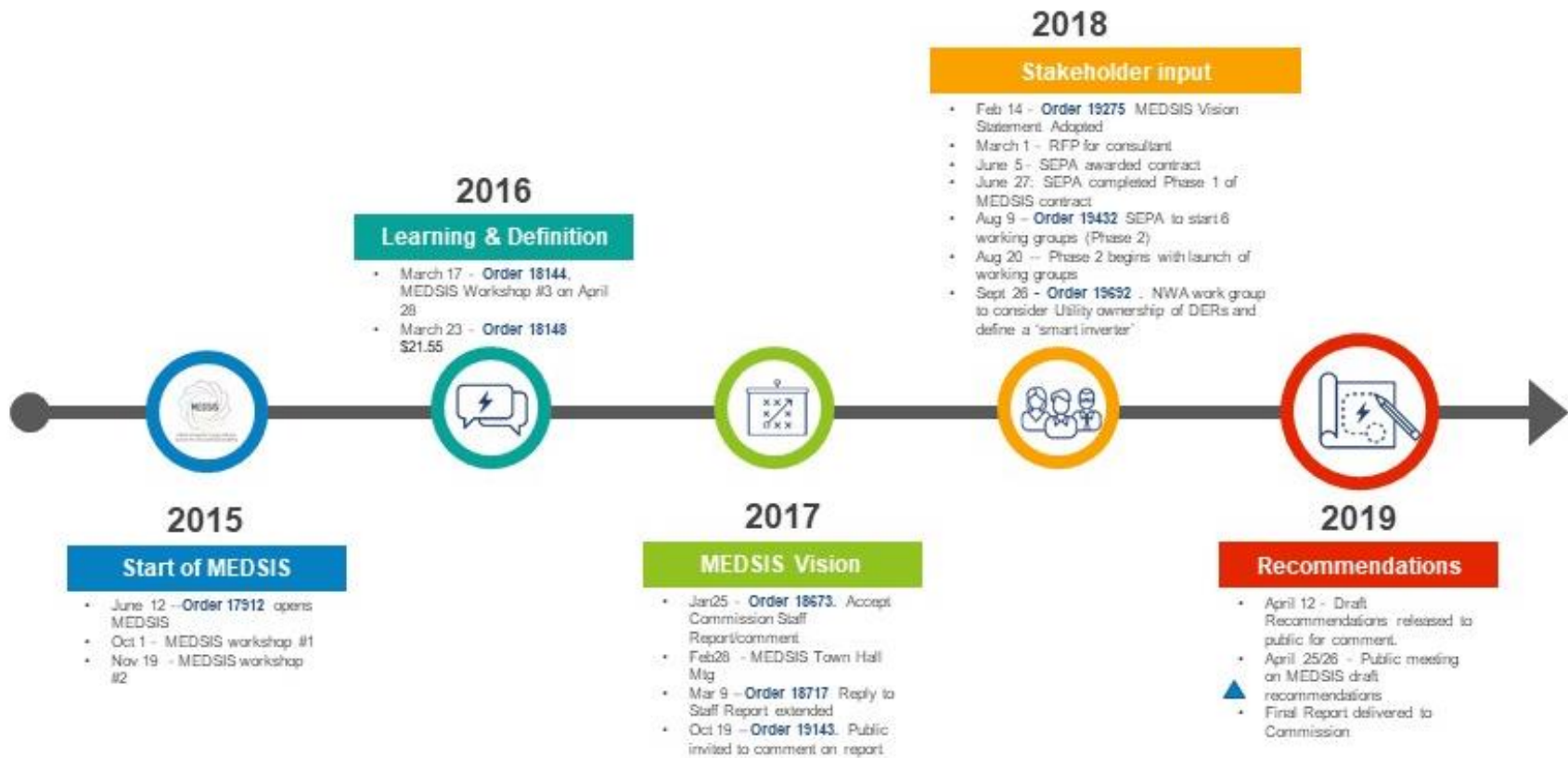
A. Procedural History

2. On June 12, 2015, by Order No. 17912 issued in *Formal Case No. 1130*, the Commission opened this proceeding to identify technologies and policies that can be implemented in the District of Columbia (“the District”) to modernize the distribution energy delivery system for increased sustainability (“MEDSIS”). Since its inception, the Commission has been committed to engaging stakeholders and the public at large in the MEDSIS process to help identify key issues as well as leverage stakeholder insight and expertise to help inform the Commission’s decision-making (*Figure 1*). In Phase 1 of the MEDSIS Initiative, the Commission, in addition to aligning on-going and related cases and initiatives, also: (1) held numerous technical workshops and town hall meetings; (2) issued a detailed Staff Report outlining the Commission’s jurisdiction, identifying regulatory barriers to grid modernization, and providing a framework for the subsequent MEDSIS Initiative phases, including Pilot Project Funding parameters;⁴ and (3) adopted the MEDSIS Vision Statement and Guiding Principles,⁵ which provides a flexible framework to guide the Commission’s future decision-makings around grid modernization matters.

⁴ As a result of the PHI-Exelon Merger approved by the Commission in *Formal Case No. 1119*, Order No. 18148 on March 23, 2016, a \$21.55 million MEDSIS Pilot Project Fund Subaccount was created, and the funds therein were directed to be used to support pilot projects related to energy delivery system modernization under consideration in *Formal Case No. 1130*.

⁵ *Formal Case No. 1130*, Order No. 19275, rel. February 14, 2018.

Figure 1: MEDSIS Procedural Timeline



3. In Phase 2 of the MEDSIS Initiative, the Commission contracted with Smart Electric Power Alliance (“SEPA”)⁶ as the MEDSIS Working Group (“WG”) facilitator and began the year-long stakeholder working group process by first approving the formation of six (6) WGs: (1) Data and Information Access and Alignment (“DIAAWG”); (2) Non-Wires Alternatives to Grid Investments (“NVAWG”); (3) Rate Design (“RDWG”); (4) Customer Impact (“CIWG”); (5) Microgrids (“MWG”); and (6) Pilot Projects (“PPWG”). The MEDSIS WGs collaboratively developed charters, goals, and expected outcomes for each group taking into consideration the MEDSIS Vision Statement and the District Government’s clean energy policy goals.

4. Phase 2 of the Initiative, the MEDSIS Working Group process, culminated in the submission of the Final WG Report on May 31, 2019, containing 32 recommendations and learnings for Commission consideration.

B. Overview of Phase 2: MEDSIS Working Group Process

5. In Phase 2 of the MEDSIS Initiative, the six (6) working groups identified the overarching purpose and goal for each group. Each working group developed its own charter and desired outcomes. A summary of each working group follows:

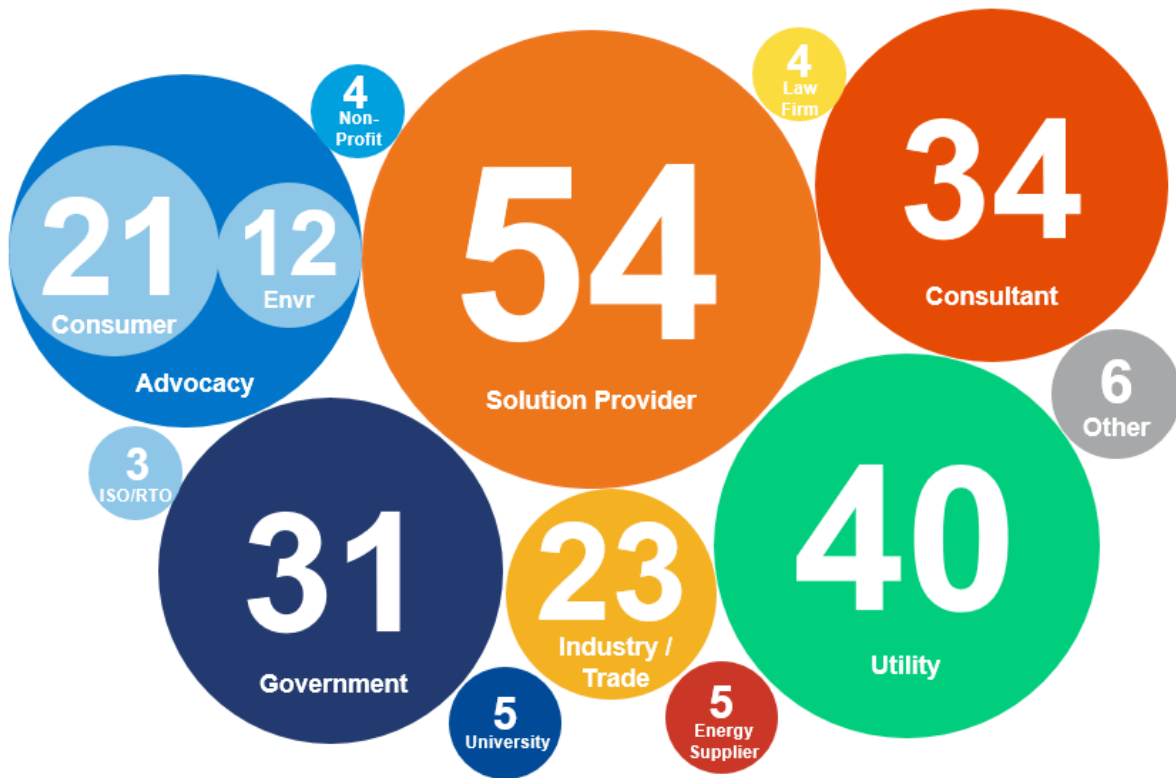
- Working Group 1: DIAAWG – This working group was responsible for covering the alignment of the MEDSIS Vision Statement and Guiding Principles with the entire Working Group process. The DIAAWG functioned as a forum to coordinate data and information in an accessible format with all the stakeholders between all Working Groups, including utility data and information related to relevant ongoing proceedings.
- Working Group 2: NVAWG – This working group addressed Pepco’s interaction with specific technologies including, but not limited to, advanced control systems, energy storage, fuel cells, electric vehicles, photovoltaic systems, smart inverters, and voltage regulation equipment as well as the rules concerning Pepco’s need to consider these technologies in the utility’s distribution integrated resource planning process.
- Working Group 3: RDWG – This working group investigated the impact of rate design on distributed energy resource (“DER”) adoption, evaluated alternative rate designs, and addressed the basis for setting rates and proper cost causation and realization.
- Working Group 4: CIWG – This working group addressed how increased DER integration impacts different customer types, particularly regarding customer equity, utility customer service, customer data privacy and low-income customer inclusion.
- Working Group 5: MWG – This working group addressed microgrid development in the District, including newly constructed microgrids and retrofitted microgrids. The group examined the benefits and costs of microgrids to produce recommendations to address microgrid ownership, operation, standards, and implementation.

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

- Working Group 6: PPWG – This working group was responsible for finalizing the parameters regarding pilot project governance, selection, and management found in Section VII of the MEDSIS Staff Report. This group did not focus on producing actual pilot project concepts.

6. The MEDSIS WG process was open to the public so that anyone wishing to participate had the opportunity to have their voice heard. Stakeholders that participated in the Phase 1 workshops and technical conferences were recruited to participate in the Phase 2 WGs, along with other key District industry, governmental, public policy, and consumer stakeholder groups. This resulted in a diverse set of working group participants. In total, two hundred forty-two (242) individuals participated as stakeholders (*Figure 2*).

Figure 2: MEDSIS Participation Breakdown



The Commission is pleased with the high level of stakeholder engagement throughout the MEDSIS WG process. We appreciate the huge time and resource commitment that was required from stakeholders to participate consistently in the over 50 working group meetings. The diverse and robust stakeholder participation has resulted in a host of recommendations that are forward-thinking and clearly cognizant of the District’s desire to be a leader in clean energy and environmental conservation.

III. DISCUSSION

DATA AND INFORMATION ACCESS AND ALIGNMENT

A. Working Group 1 – Data and Information Access and Alignment (DIAA)

7. The DIAAWG functioned as a forum to coordinate data and information in an accessible format with all the stakeholders between all WGs, and worked to identify measurable objectives of the MEDSIS Vision Statement to develop an informed process for the Commission to make regulatory decisions. The key questions addressed by the DIAAWG and the desired outcomes are specifically listed on pages 26-27 of the Final WG Report. Discussion of the DIAAWG Recommendations and Learnings are set forth in Chapter 5.1 of the Final WG Report (pages 55-84) and consists of nine (9) Recommendations and one (1) Learning.

1) DIAAWG R-5.1.1: Commission to Explore Metric for Evaluating Carbon Footprint Impact of DER Projects

8. The DIAAWG’s first recommendation is for the Commission to explore metrics for evaluating the carbon footprint of DER projects.⁷ The pertinent provisions in this recommendation are as follows:

[E]xplore the development of a metric for evaluating carbon footprint impact of distributed energy resource (DER) projects—including, but not limited to solar photovoltaics (PV), microgrids, energy efficiency (EE), electric vehicles (EV) and combined-heat-and-power (CHP). This metric could be integrated into the evaluation of non-wires alternatives (NWAs). The metrics to explore include but are not limited to tCO₂e/MW, tCO₂/MWh and tCO₂e/kBtu.⁸

9. Focusing on the Commission’s MEDSIS Guiding Principles, stakeholders proposed adding additional measurable objectives or recommendations to each existing principle. As such, the Apartment and Office Building Association of Metropolitan Washington (“AOBA”) recommended that “every proposal should be subject to cost and benefit criteria.”⁹ The Office of the People’s Counsel (“OPC”) supports the District Department of Energy and Environment’s (“DOEE”) “general idea to adopt a cost of greenhouse gas (“GHG”) emissions in evaluating utility programs and expenditures” and suggests that the Commission not “only evaluate the GHG emission of DER as it is currently written—rather it’s about comparing the GHG profile of DER vs. traditional types of projects and expenditures.”¹⁰ DOEE further suggests that the Commission

⁷ Final WG Report at 56.

⁸ Final WG Report at 56.

⁹ Final WG Report at 56.

¹⁰ Final WG Report at 57.

adopt “EPA’s social cost of carbon as an implicit cost of projects (for the time being until a more robust, updated carbon cost can be evaluated and adopted) that use fossil fuels or electricity from power plants using fossil fuels, which would include transmission and distribution lines and pipes (to the extent that they import fossil-fuel sourced electricity and natural gas).”¹¹ Grid Alternatives Mid-Atlantic (“Grid Alternatives”) and New Columbia Solar (“NCS”) support DOEE and suggest maximization of GHG reductions should also coincide with maximizing equity impacts and should not disproportionately impact underserved communities.¹² Lastly, Solar United Neighbors of DC (“DC SUN”) supports the recommendation but notes that “the metric must include a lifecycle analysis of traditional or ‘business-as-usual’ utility investments.”¹³

10. The development of a carbon footprint metric, as noted by the participants, is a sector that requires a high level of expertise in environmental impacts. The Commission recognizes that DOEE is the agency under the Mayor designated to track greenhouse gas emissions and the District’s progress in meeting its carbon neutral goal in 2050.¹⁴ Thus, we believe that DOEE is better positioned to lead the development of a carbon footprint metric for the District. However, the Commission would like to work jointly with DOEE in this effort, allocating technical staff to assist DOEE, especially as it pertains to considerations of the economic impacts that a carbon footprint metric may have on District ratepayers. Further, should funding be a concern, then DOEE and other stakeholders are welcome to submit a proposal for the development of a carbon footprint metric utilizing MEDSIS funding during the pilot project phase. Therefore, the Commission has included the concept in the non-exhaustive list of pilot project concepts and goals provided at Appendix C. For the above reasons, the Commission declines to develop a carbon footprint metric as per the recommendation; however, the Commission is available to work jointly with DOEE, as the lead, on the development of such a metric for the District.

2) DIAAWG R-5.1.2: Commission to Develop Benefit Cost Analysis (BCA) Methodology

11. With the intention of advancing an affordable energy delivery system, the DIAAWG addressed the possible value of developing a Benefit Cost Analysis (“BCA”) methodology that could incorporate environmental and health benefits and proposes that the:

DCPSC should develop a white paper on a BCA methodology framework that incorporates environmental and health benefits along with indirect costs of stranded assets. The white paper on BCA framework should take into account and evaluate different methodologies in light of the MEDSIS Guiding Principles, as well as examining proceedings undertaken in other jurisdictions. The white paper could be the first step for the DCPSC to issue an

¹¹ Final WG Report at 56.

¹² Final WG Report at 57.

¹³ Final WG Report at 58.

¹⁴ See <https://doee.dc.gov/service/greenhouse-gas-inventories>.

eventual order for a BCA framework to be used for assigning benefits and costs in evaluating NWAs to grid investments. Any costs associated with developing a white paper on a BCA methodology framework should come out of the MEDSIS Pilot Fund. DCPSC should ensure that the development of a BCA methodology framework in the District does not delay any NWA consideration processes in distribution system planning. The BCA methodology and framework could be integrated into any NWA consideration processes as they evolve.¹⁵

12. Generally, the stakeholders support this recommendation mentioning that “the BCA [should] apply to energy distribution investments including gas,” and consider “DC’s need to increase equity.”¹⁶ DOEE states that “the BCA Methodology should include some way of accounting for the cost of carbon emissions and other measurable environmental impacts, and be applied to all electricity and natural gas system investments” while “encompass[ing] the element of locational value of DER.”¹⁷ Grid 2.0, DC Consumer Utility Board (“DCCUB”), and Sierra Club support the recommendation noting that the Commission should develop a methodology that aligns with the MEDSIS Principles and recommends that the Commission review the New York Reforming the Energy Vision (“NYREV”) proceeding to develop a new BCA method for the District.¹⁸ OPC conditionally supports the recommendation with the belief that “a cap and/or range should be established[.]” with clear framework detailing the development of the white paper.¹⁹ The Potomac Electric Power Company (“Pepco”), Fluence, and Edison Electric Institute (“EEI”) opposed this idea. EEI asserts that a more substantive discussion needs to occur given that “BCA methodologies should never incorporate externalities such as social or health benefits that are inherently speculative and for which there is no market or market-based proxy.”²⁰ Fluence is concerned with the possibility that this development will only “delay the implementation of the proposed NWA process, to the detriment of the D.C. residents.”²¹ Pepco asserts that the incorporation of the suggested BCA “is more likely to result in a number of contentious proceedings regarding underlying assumptions and assigned values than an advancement of MEDSIS Principles,” thus suggesting that the Commission within the context of a rate case “evaluate the prudence and cost of the NWA solutions relative to benefits consistent with the current DCPSC practice.”²²

¹⁵ Final WG Report at 59.

¹⁶ Final WG Report at 60, Comments by DCCA and DC SUN, respectfully.

¹⁷ Final WG Report at 60.

¹⁸ Final WG Report at 61.

¹⁹ Final WG Report at 62.

²⁰ Final WG Report at 60-61.

²¹ Final WG Report at 60-61.

²² Final WG Report at 62.

13. While the Commission finds value in this recommendation, development of BCA methodology appears to be an unsettled matter within the energy sector, with many questioning its appropriateness in comparison to other analytical methods. The Commission generally applies the All Ratepayers Test and a Societal Cost Test when a new utility program requiring a BCA is proposed. For example, in *Formal Case No. 1086*, Pepco filed both BCA results, and the Commission approved the Demand Response Program given both tests indicated that the program was cost effective.²³ Understanding the value and the need of incorporating both economic and environmental factors when making its decisions, as directed by the Clean Energy DC Act,²⁴ the Commission will continue to use such established tests as well as consider more flexible frameworks, such as the application of the MEDSIS Vision Statement and Guiding Principles to review qualitative factors in addition to quantitative analysis presented in a BCA analysis (see Commission directives in R-5.1.3 and R-5.1.9). We will also consider other states' BCA frameworks (such as New York and California) in evaluating NWAs. However, we do not view the development of yet another industry white paper on BCA methodology as a fruitful endeavor at this time.

3) DIAAWG R-5.1.3: Commission to Align MEDSIS with Clean Energy DC Act

14. To advance a sustainable energy delivery system, the DIAAWG recommends that all Commission projects, programs, and initiative decision-making should align with provisions of the Clean Energy DC Act. The Commission provides an overview of the Clean Energy DC Act's Commission-specific directives at Appendix A.

15. This recommendation was overwhelmingly supported by all stakeholders with DOEE and WGL Energy noting that the Commission should "issue a new set of regulations" and "rules" to comply with the new law.²⁵ The Commission has reviewed the Clean Energy DC Act and accepts this recommendation. Indeed, we have already begun the process of implementing the requirements of the Act, as well as aligning our decisions with the directives and overall goals of the legislation.²⁶ For example:

²³ See *Formal Case No. 1086, In the Matter of the Investigation into the Potomac Electric Power Company's Residential Air Conditioner Direct Load Control Program* ("Formal Case No. 1086"), Formal Evaluation Report of the Potomac Electric Power Company's District of Columbia Residential Air Conditioner Direct Load Control Program, at 5, filed April 2, 2014. (Discussion of the Total Resource Test and Societal Cost Test). The Evaluation Report was directed as part of *Formal Case No. 1086*, Order No. 16602, ¶ 15, rel. November 3, 2011.

²⁴ Clean Energy DC Omnibus Amendment Act of 2018, D.C. Law 22-257, effective March 22, 2019 ("CleanEnergy DC Act").

²⁵ Final WG Report at 63 and 64.

²⁶ The Commission notes that the implementation of some sections of the Clean Energy DC Omnibus Amendment Act of 2018, D.C. Law 22-257, effective March 22, 2019 ("Clean Energy DC Act") is tied to the beginning of the 2020 Fiscal Year on October 1, 2019. Therefore, while the Commission is poised to act immediately, we are bound by the applicability date as set forth in the Clean Energy DC Act.

- a. The Commission opened *Formal Case No. 1148* to consider appropriate energy efficiency programs, and by Order No. 19428 approved the use of the funds towards the implementation of the Whole Building Deep Energy Retrofit Program proposed by National Consumer Law Center and OPC.²⁷
- b. To implement amended D.C. Code § 34-1439 (b-1), on July 2, 2019, the Commission issued Order No. 19969, directing Pepco to file quarterly the total amount of solar energy from solar energy systems meeting the requirements of D.C. Code § 34-1432 (e)(1).²⁸

16. Additionally, Section 103 of the Clean Energy DC Act amends D.C. Code § 34-808.02 and directs the Commission to consider environmental impacts and global climate change in our decision-makings.²⁹ The Commission recognizes that the MEDSIS Vision Statement and Guiding Principles encompass the requirement that any project or proposal submitted for approval to the Commission should be, among other things, sustainable – factoring in environmental protections and the District’s clean energy goals. However, in order to clarify the alignment between the applicability of the MEDSIS Vision Statement and the Clean Energy DC Act, as discussed further in our decision in Recommendation 5.1.9, the Commission directs proponents of any proposal for Commission approval to explain how the proposal comports with and advances the MEDSIS Vision, including the proposals’ effects on global climate change and the District’s public climate commitments.

4) DIAAWG R-5.1.4: Commission to Continue to Improve Small Generator Interconnection Process

17. The DIAAWG recommends that “the DCPSC [] give oversight to Pepco to continue to improve its Small Generator Interconnection Process to facilitate DER deployment in the District.”³⁰ The DIAAWG notes that their intent during discussions was to continue to evolve the small generator interconnection process and create revenue mechanisms that reward or

²⁷ *Formal Case No. 1148, In the Matter of the Investigation into the Establishment and Implementation of Energy Efficiency and Energy Conservation Programs Targeted Towards Both Affordable Multifamily Units and Master Metered Multifamily Buildings which Include Low and Limited Income Residents in the District of Columbia* (“*Formal Case No. 1148*”), Order No. 19428, rel. August 9, 2018.

²⁸ *Formal Case No. 1050, In the Matter of the Investigation of Implementation of Interconnection Standards in the District of Columbia* (“*Formal Case No. 1050*”); and *RM40-2017-01, In the Matter of 15 DCMR Chapter 40 – District of Columbia Small Generator Interconnection Rules* (“*RM40-2017-01*”), Order No. 19969, rel. July 2, 2019.

²⁹ Section 103 of the Act amends D.C. Code § 34-808.02 (Supp. 2019) as follows: In supervising and regulating utility or energy companies, the Commission shall consider the public safety, the economy of the District, the conservation of natural resources, and the preservation of environmental quality, including effects on global climate change and the District’s public climate commitments.

³⁰ Final WG Report at 64.

penalize Pepco for increased efficiency in the interconnection process.³¹ Further, the DIAAWG took notice of a number of recent Commission actions to improve the interconnection process in *Formal Case No. 1050*.³²

18. All stakeholders generally support this recommendation. DC SUN “believes this recommendation should also include interconnection of Community Solar projects” which aligns with Recommendation 5.2.7.³³ DOEE suggests that the recommendation focus on the “1) need [of] rules for islanding various systems and interconnection of storage, 2) denied application for Levels 2 and 4 renewable systems should trigger the NWA process for hosting capacity constraints and 3) transparency in the pricing process and set timelines.”³⁴ EEI notes that “costs of improvements in the interconnection process – which can be substantial depending on the type of improvement – must be carefully considered to ensure that standard customers do not shoulder the cost burden”.³⁵ Grid 2.0, DCCUB, and Sierra Club suggest that the Commission “‘provide’ oversight, rather than ‘give’ it.”³⁶

19. The Commission approves this recommendation and acknowledges the progress Pepco has made in improving its interconnection processing time lines. We also emphasize our commitment to continue to review issues related to interconnection in *Formal Case No. 1050*. The Commission reiterates that it recently finalized small generator interconnection rules that include aggressive interconnection time lines and compliance with the IEEE 1547-2018 Standard, which requires DERs to be capable of providing grid supportive functionalities relating to voltage, frequency, community, and controls. Furthermore, the Commission is currently working with stakeholders on community renewable energy facility (“CREF”) rules, and other rules as DER projects are implemented. The Commission directs Commission Staff, as mentioned in Recommendation 5.2.7, to lead educational workshops in *Formal Case No. 1050* to inform stakeholders and solicit their input on IEEE updates and any other applicable industry advancements. The first educational workshop is to be scheduled and held within 120 days from the date of this Order (see R-5.2.7).

5) DIAAWG R-5.1.5: Commission to Revise Language in MEDSIS Vision Statement

20. The DIAAWG recommends the Commission update the language to the term “Affordable” in Section A.4 of the MEDSIS Vision Statement and Guiding Principles to reflect its

³¹ Final WG Report at 64.

³² The Commission issued a Notice of Final Rulemaking in January 2019 addressing best practices of interconnection for small generators (less than 20MW) over time and amendments to IEEE 1547.

³³ Final WG Report at 65.

³⁴ Final WG Report at 65.

³⁵ Final WG Report at 65.

³⁶ Final WG Report at 65.

applicability to both the electric and natural gas utilities.³⁷ The DIAAWG proposes three changes: (1) that the Commission recognize that rapid technological change increases the danger of “stranded assets” (capital investments that turn out to be unneeded); (2) that the electric and gas utilities undertake holistic planning approaches that fully examine technological options that can be deployed to meet policy objectives and customer expectations for continued system reliability and affordability; and (3) that the Commission expects DERs to be able to stand on their own without subsidies from ratepayers.³⁸

21. All stakeholders agree with the recommendation with a few suggested clarifications. DOEE, while it supports the recommendation, notes that “although DER should be market competitive, DC government still may need to incentivize fuel switching in order to counteract the current low price of natural gas to support its climate change goals.”³⁹ DC SUN notes that it “supports the original MEDSIS Vision Statement wording, from which the recommendation deletes the phrase at the end, ‘and considered in connection with the benefits and efficiencies such DER may bring to the distribution system.’”⁴⁰ Sunrun, Inc. (“Sunrun”) opposes the recommendation disputing the “assumption in Proposed Change #3 that electric and natural gas distribution ratepayers subsidize DERs.”⁴¹

22. The Commission approves and adopts the proposed changes, with slight modifications, as reflected in the updated, MEDSIS Vision Statement provided at Appendix B to this Order. We also note that the Vision Statement is ever-evolving, and future updates will likely be needed. The Commission encourages and reminds stakeholders that they can file requests in the *Formal Case No. 1130* docket to amend the Vision Statement in the future, and the Commission commits to reviewing and revising the MEDSIS Vision Statement on a quadrennial basis or as otherwise needed to ensure it continues to accurately reflect our vision for grid modernization.

6) DIAAWG R-5.1.6: Commission to Develop Publicly Available System-Level Data Webpage

23. The DIAAWG recommends that the Commission should consider hosting and maintaining an online bibliography that allows access to publicly available system-level data in the District, asserting that this webpage should contain links to mapping, interconnection queues, and other public documents where system-level data in the District resides.⁴² The DIAAWG proposes that Pepco should continue to be responsible for updating and maintaining the source of

³⁷ Final WG Report at 66.

³⁸ Final WG Report at 66.

³⁹ Final WG Report at 67.

⁴⁰ Final WG Report at 67.

⁴¹ Final WG Report at 68.

⁴² Final WG Report at 69.

the data and the Commission should ensure that the data is properly linked and easily viewable and accessible via the website. Additionally, any costs associated with developing the system-level data online bibliography should come out of the MEDSIS Pilot Fund. Finally, any non-public, location-specific system-level data can, when appropriate, be made available through a Pepco-implemented secured web portal and NDA process outlined in Recommendation 5.1.8.⁴³

24. During stakeholder discussions, a chart was created to indicate the different types of system-level data that are currently available.⁴⁴ The chart includes data type, frequency that the data is provided by the utility, granularity and availability. Generally, all stakeholders support this recommendation, but some with conditions. For example, the Coalition for a Resilient DC suggests that “an independent party should be responsible for making system-level data accessible but [] recommends this be consolidated under an independent market operator to provide one centralized, accessible location for all energy data.”⁴⁵ DOEE suggests that this recommendation be consolidated with Recommendation 5.1.8, which recommends the creation of a secured portal for RFP Responses and Programmatic Data Requests.⁴⁶ WGL Energy suggests that “[g]as should . . . be added to the system level-data with Washington Gas being responsible for maintaining gas-related webpage data.” WGL Energy also notes that the MEDSIS Pilot Fund should not finance ongoing additions to the online bibliography.⁴⁷

25. Given the fact that Pepco already has a publicly available web portal containing its system level data, the Commission does not believe it is necessary to develop a new webpage to house such information. The Commission accepts a modification of the proposal by providing a link on its website for access to Pepco’s web portal. The Commission acknowledges that not all system level data being requested by stakeholders is readily available on Pepco’s web portal. For instance, some data is contained in Pepco’s Annual Consolidated Report (“ACR”) and has not yet been digitized, even though the Commission and OPC continue to work with Pepco to streamline the ACR and move certain information to digital format. The Commission therefore directs Pepco to review the DIAAWG Recommendation 5.1.6 and update its website to facilitate data availability, including adding requested data from the ACR to its website. Pepco shall file a report with the Commission within 60 days of the date of this Order detailing what data has been added, what data, detailing will be added and in what timeframe, and justifying any deviations from the DIAAWG’s recommendations.

26. WGL Energy requests that WGL’s system level information be made available as well. Currently, the Commission is unaware of a similar portal maintained by WGL; therefore, the Commission directs WGL to create a similar portal for its publicly available system level data and to confirm the portal’s creation by filing a statement of compliance within 60 days of the date of this Order. Additionally, the Commission directs Pepco and WGL to include link(s) to these

⁴³ Final WG Report at 69.

⁴⁴ Final WG Report at 69, see Table 5.2.

⁴⁵ Final WG Report at 71.

⁴⁶ Final WG Report at 71.

⁴⁷ Final WG Report at 71.

portals in their filings so that the we can include this information on our website under the appropriate webpage(s).

7) DIAAWG R-5.1.7: Commission to Direct Pepco to Update Hosting Capacity Maps on a Monthly Basis

27. The DIAAWG recommends that the Commission direct Pepco to update hosting capacity maps on a monthly basis, noting that the frequency in which Pepco provides the updated information should be reviewed annually by the Commission.⁴⁸ This recommendation is overwhelmingly supported by all the stakeholders. DC SUN, while it supports this recommendation, notes that Pepco, besides updating the information, needs “to do a deeper dive into the methodology for assessing capacity” because “assessing hosting capacity needs to be examined, refined and transparent” given the fact that “the process needs to be more rigorous, robust and defensible.”⁴⁹ DOEE conditionally supports the proposal and notes that “this recommendation should provide that the system performance data determining the hosting capacity of a particular line will be made available in accordance with the NWA planning process.”⁵⁰ Lastly, Grid Alternatives supports the recommendation and notes that the Commission “should also consider the substantive criteria for identifying hosting capacity constraints.”⁵¹

28. In addition to the broad support from stakeholders for this recommendation, Pepco indicated that it already updates hosting capacity maps on a quarterly basis and can update it on a monthly basis.⁵² Therefore, the Commission approves this recommendation and directs Pepco to begin updating the hosting capacity maps on its website on a monthly basis within 90 days from the date of the Order.

8) DIAAWG R-5.1.8 and L-5.1.10: Commission to Direct Pepco to create a Secure Web Portal for RFP Responses and Programmatic Data Requests

29. The DIAAWG also recommends that the Commission direct Pepco to create a secure web portal and non-disclosure agreement (“NDA”) process to enable system-level data flow between third parties and the utilities for RFP responses and programmatic data requests pertaining to the MEDSIS Pilot Project process. The secured web portal and NDA process could also facilitate the sharing of non-public, location-specific system-level data. The DIAAWG recommends that the costs associated with developing and implementing this recommendation be subject to appropriate rate recovery. The DIAAWG also recommends that the Commission direct Pepco to ensure that the third parties and government agencies that receive data directly from the secured web portal are held to appropriate standards in their policies and practices to address

⁴⁸ Final WG Report at 71.

⁴⁹ Final WG Report at 72.

⁵⁰ Final WG Report at 72.

⁵¹ Final WG Report at 73.

⁵² Final WG Report at 71-72.

cybersecurity threats.⁵³ Further, stakeholders recognize that critical infrastructure information and personally identifiable information must not be shared publicly and that the sharing of such information should be held to standards governed by NERC and D.C. Law.⁵⁴

30. Stakeholders, including Pepco, support the need for this secure web portal. Arcadia Power notes that “the web portal . . . will ensure that Pepco’s RFPs receive cost-effective responses.” The D.C. Sustainable Energy Utility (“DCSEU”) “welcomes the opportunity to work with existing systems and stakeholders to determine the most cost efficient and secure means to facilitate proper exchange, access and quality assurance for such data”, and DOEE notes that “[a]ccess to data at a sufficient level of granularity will be critical for implementing plans that bring the District into compliance with the Clean Energy goals.”⁵⁵ OPC supports the recommendation conditionally, noting that, while third-parties should have to pay for access to data, the Commission and “other DC government agencies should not.” OPC also asserts that the Commission should clarify that appropriate costs are subject to recovery instead of simply stating all costs will receive rate recovery.⁵⁶ DC Climate Action (“DCCA”) notes that the Commission may “wish to direct Washington Gas to create a corresponding web portal for RFP responses and programmatic data requests concerning gas,” and WGL Energy notes it will support the recommendation on the condition that “third parties will provide cybersecurity protections commensurate with the level of security for the type of data they obtain.”⁵⁷

31. The Commission finds that approving this recommendation, including DCCA’s request that WGL create a comparable secure web portal, is reasonable given not only the broad stakeholder support for this recommendation, but also considering that increased data sharing is necessary to facilitate the successful implementation of the MEDSIS Pilot Projects and Pepco’s new distribution system planning (“DSP”) process. We also believe that employing this data sharing process beyond the MEDSIS Pilot Projects is appropriate,⁵⁸ *i.e.*, the secure portals developed by Pepco and WGL should be used to handle data requests related to all of the utilities’ RFPs, not just those related to the MEDSIS Pilot Projects, as well as set up to handle two-way data flow from service providers to the utilities. The utilities will maintain full responsibility for maintaining their secure web portals and approval of third-party access to it. The Commission also takes OPC’s comments into consideration and will determine the appropriate costs associated

⁵³ Final WG Report at 73.

⁵⁴ Final WG Report at 74.

⁵⁵ Final WG Report at 75.

⁵⁶ Final WG Report at 75.

⁵⁷ Final WG Report at 75.

⁵⁸ The Commission recognizes that in Learning 5.1.10 the DIAAWG created and provided in the report Table 5.4 which indicates the type of data stakeholders would request and the intended uses. While, Table 5.5 indicates Pepco’s responses to the type of data requests data it already supply’s, whether the data is unavailable for legal propriety/technical reasons, or if could be made conditionally available. The Commission recommends that Pepco utilizes the charts to develop the secure web portal.

with this recommendation for rate recovery in future rate cases. Therefore, the Commission directs:

- a. The utilities to develop and report on the status of implementing the secure web portal within 120 days of this order;
- b. That development and implementation of Pepco's secure web portal corresponds with the stakeholders recommended informed DSP and NWA Consideration Process as approved in Recommendation 5.2.3; and
- c. That Pepco shall include in its Annual Consolidated Report, and WGL shall file annually, a report on the secure web portal, including, but not limited to: details on: (a) how many requests for data were received; (b) how many of those requests were granted, denied, or withdrawn; (c) the average response time to provide the requested data; (d) a list identifying the organizations that requested data, and (e) the costs incurred for the provision of data, including costs paid by the requestor for customized data.

While the reasonable costs of creating and maintaining this secure portal may be recoverable in rates, if a requestor wants information to be provided in a customized format, then the requestor will bear the cost associated with the provision of the customized information. While we do not substitute our judgment for Pepco's on matters of cyber security and customer data protection, if a request either for access to the secure portal or for specific information is denied for any reason, then the requestor may petition the Commission for review of the denial.

9) DIAAWG R-5.1.9: Apply MEDSIS Guiding Principle Metrics to General Commission Decision Making

32. The DIAAWG discussed the Commission's MEDSIS Guiding Principles and proposed adding input around measurable objectives, resulting in a recommendation that the:

DCPSC should consider using the metrics for the 7 MEDSIS Guiding Principles as discussed in Recommendation 5.6.2 more broadly to provide guidance for decision making and not just as a screening tool for pilot projects.⁵⁹

33. The DIAAWG provided input that essentially helped develop a "Pilot Project Screening and Scoring Template"⁶⁰ and recommends that these metrics, objectives and processes be used by the Commission for general decision-making considerations, not just for screening pilot projects.⁶¹ Generally the participants are in agreement on this recommendation; however, EEI notes that "[n]ot all Commission decisions should be subjected to metrics developed for MEDSIS;

⁵⁹ Final WG Report at 76.

⁶⁰ Final WG Report at 396, *see also* Recommendation 5.6.2 at Final WG Report at 226.

⁶¹ Final WG Report at 76.

the Commission must have the latitude to determine which metrics to apply to which proceedings.”⁶² Pepco supports this recommendation, but clarifies that the MEDSIS Guiding Principles “should be loadstones that guide the Commission’s consideration of a variety of electric and gas system decisions;” therefore the Commission “must use its discretion to determine the metrics associated with these principles to apply to specific proceedings and how to balance the application of these metrics with other precedents and factors that have historically been applied to aid Commission decisions.”⁶³

34. The DIAAWG’s scoring sheet provided at Appendix A.8 to the Final WG Report provides an appropriate guide for scoring the pilot projects against the MEDSIS principles; however, we believe that flexibility is needed in how these principles may be applied to pending and future Commission proceedings. For example, it may not be appropriate to weigh each of the seven principles equally in every case as reflected in Appendix A.8, where each factor would be weighed on a 10-point scale. For this reason, the Commission modifies this recommendation, reiterating our commitment to applying the MEDSIS Vision and Guiding Principles to our decisions, but clarifying that we will use our discretion in how to weigh the principles given the specific matter before us.⁶⁴ Therefore, we expect the utilities and other proponents of proposals requiring the Commission’s approval to include a thorough analysis of how the proposal comports with and advances the goals of the MEDSIS Initiative in light of: (1) the amended MEDSIS Vision Statement adopted by this Order (see Appendix B); and (2) the Clean Energy DC Act’s requirement that the Commission consider the “effects of global climate change and the District’s public climate commitments” in our decision-making.⁶⁵ The analysis provided will inform our decision regarding the reasonableness of and need for the proposed project(s).

35. Separately, the Commission approves the use of the screening and scoring templates developed for evaluating Pilot Projects provided at Appendix A.8 of the Final WG Report (see Commission decisions on R-5.6.1 and R-5.6.2).

⁶² Final WG Report at 76.

⁶³ Final WG Report at 77.

⁶⁴ The Commission notes that it is common when applying multiple factors to a decision for those factors to not be weighed equally in all cases. For example, when deciding applications for mergers, the Commission has a list of applicable factors, but not all factors are applicable in every merger case, and the Commission does not weigh each factor equally, but balances the factors to determine whether approval of the application is on the whole in the public interest.

⁶⁵ Clean Energy DC Act § 103, amending D.C. Code § 34-808.02 (Supp. 2019) (Supervision and Regulation Consideration), states: “In supervising and regulating utility or energy companies, the Commission shall consider the public safety, the economy of the District, the conservation of natural resources, and the preservation of environmental quality, including effects on global climate change and the District’s public climate commitments.”

NON-WIRES ALTERNATIVES

B. Working Group 2 – Non-Wires Alternatives (NWA) to Grid Investments

36. The NAWWG started with defining the purpose and goals around NWAs in the District and addressed and made recommendations on the process, tools, and information requirements needed to evaluate NWAs to conventional grid infrastructure investments for meeting system needs. An objective of this group included identifying when, where, and how – in the DSP process – the utility and third-party providers can propose NWAs and the risks and compensations for NWAs. The NAWWG also considered utility access to and interaction with DERs as defined by the Commission, including advanced inverters and regulation control equipment. The Group specifically addressed utility ownership of DERs. The group helped to ensure that grid upgrades fully consider DERs for meeting system constraints prior to any grid infrastructure plans.⁶⁶ The key questions to be addressed by the NAWWG and the desired outcomes are specifically listed on pages 28-30 of the Final WG Report.⁶⁷

37. The discussion of the NWA Recommendations and Learnings are set forth in Chapter 5.2 of the Final WG Report (pages 85-118) and consist of five (5) Recommendations and two (2) Learnings.

1) NWA R-5.2.1: Commission to Establish an NWA Definition

38. The first NWA recommendation is that the Commission should establish the following NWA definition and add it to the list of MEDSIS definitions within *Formal Case No. 1130*.

“Non-wires alternative (NWA)” is any action or strategy in the energy delivery system domain that uses non-traditional transmission and/or distribution solutions—such as distributed generation, energy storage, energy efficiency, demand response, and grid software and controls—with the intent to defer or replace the need for specific energy delivery system equipment investments. An NWA must meet energy delivery system needs and be more cost effective consistent with the guiding principles of MEDSIS; sustainable, well-planned, secure, affordable, and non-discriminatory.⁶⁸

⁶⁶ Final WG Report at 27-28.

⁶⁷ Chapter 4 of the Final WG Report (pages 17-52) provides a complete summary of the working group process for each working group, including the charters, stakeholders, topics and documents that influenced the working group process. Chapter 5 (pages 53-238) is the output of that process for each group.

⁶⁸ Final WG Report at 85.

39. The MEDSIS Consultants developed a strawman definition of an NWA based on existing published industry definitions and stakeholder input from the NWA Basics Survey that they created and sent to the stakeholders. The definition of NWA was based on those published by Navigant, NYREV Connect and the U.S. Department of Energy (DOE). The definition also stems from input collected from the following MEDSIS NWA stakeholders via an online survey: ESA, Enbala Power Systems, WGL Energy Systems, ThinkEco, Grid 2.0, PJM Interconnection, Oracle Utilities, Urban Ingenuity, Sunrun and Pepco.⁶⁹

40. Nearly all the stakeholders agree with this basic definition, but most of them support the definition with conditions or proposed revisions to the language based on the nature of their stake in the process.⁷⁰ The Commission is sensitive to the specific positions of each of the stakeholders, but it cannot provide in the definition all the revisions proposed. For example, in its position statement, DOEE asserts that the definition should be revised to state that an “NWA may be able to either partially or fully offset the need for grid investment, and be scored on a BCA framework that takes into account” the MEDSIS guiding principles. However, it is unclear why the language in the recommended definition “...with the intent to defer or replace the need for specific energy delivery system needs...” does not sufficiently address the “partially or fully offset” language proposed by DOEE. Additionally, as stated in our decision on Recommendation 5.1.9, the MEDSIS Vision Statement and Guiding Principles will be used in all Commission decisions regarding utility projects and proposals, as will consideration for the District’s Clean Energy Policy goals. We believe providing the District and other stakeholders the opportunity to better support their positions is warranted. Therefore, while the recommended definition appears to be an unbiased, neutral way of defining NWA, we believe this matter should be handled through our traditional rulemaking process so that interested persons can comment on the specific definitions proposed in more detail. Therefore, we include this definition in the proposed NOPR provided at Attachment E and direct Commission Staff to issue and finalize the definition of NWA within 180 days from the date of this Order.

2) NWA R-5.2.2: Commission to Establish NWA Classifications

41. The Final WG Report recommends that the Commission establish the following NWA classifications and use them when reviewing potential NWA projects in the District:

- (1) Method of Sourcing: The types of NWAs could vary by the method of sourcing these actions or strategies as an NWA to traditional grid investments;
- (2) Location of NWA on Energy Delivery System: The types of NWAs could vary by their location on the energy delivery system;
- (3) Portion of Energy Delivery System: The types of NWAs could vary by whether they are deferring distribution or transmission equipment investments; and

⁶⁹ Final WG Report at 85-86.

⁷⁰ Final WG Report at 86-88.

- (4) Type of Energy Service Delivered: The types of NWAs could vary by whether the investment is being made to the electricity or natural gas delivery system.

42. Most of the stakeholders support the recommendation and opposition to the recommendation is conditioned on specific revisions to the recommendation.⁷¹ We do not believe that there is enough information in the Final WG Report for the Commission to fully determine the usefulness of the proposed classifications. We agree with OPC that the first step is to identify what types of problems must be resolved, then establish the appropriate classifications.⁷² While the current classification list may not be comprehensive enough for adoption by the Commission, Pepco may find it helpful to consider these classifications as guidance when developing and issuing RFPs for new NWA projects.

- 3) NWA R-5.2.3: Commission should Order Stakeholder-Informed Distribution System Planning (DSP) and NWA Consideration Process

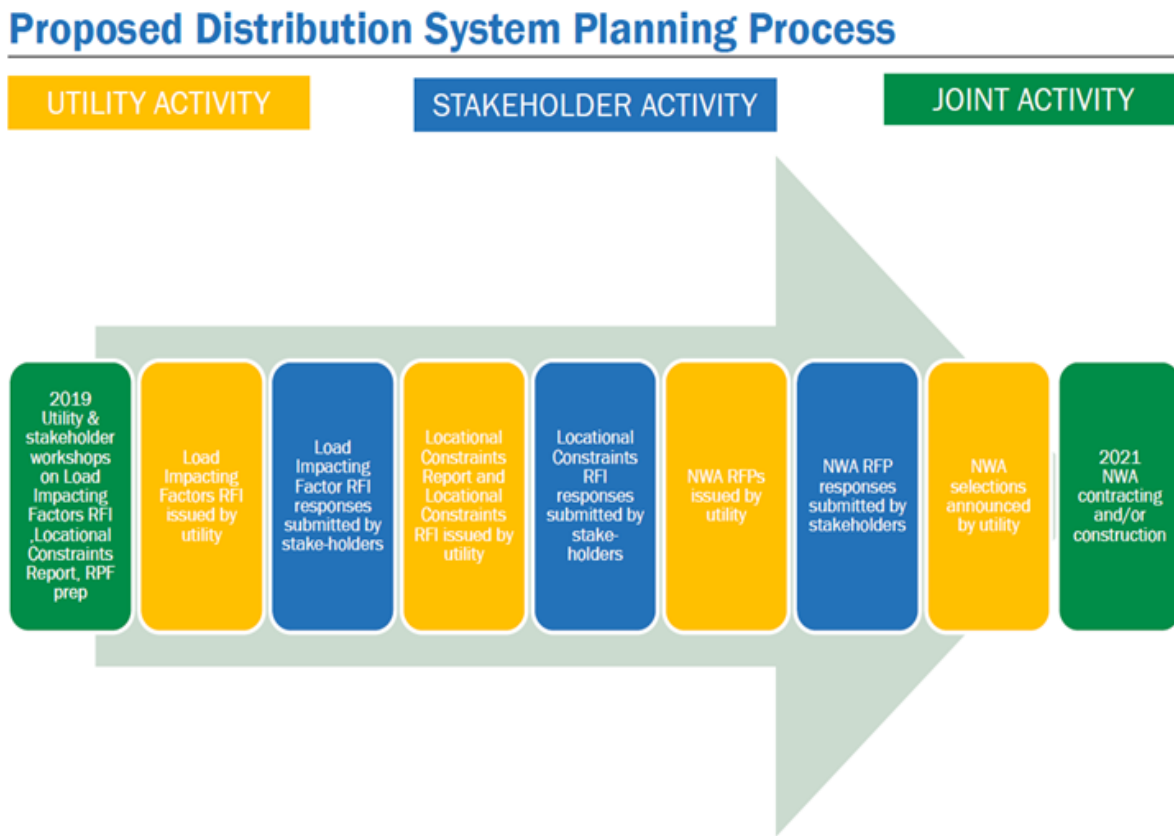
43. The third NAWWG recommendation is that the Commission should issue an order to direct Pepco to move forward with the February 19th stakeholder working group process (*Figure 3*) of the stakeholder-informed DSP and NWA consideration process (see Final WG Report at Appendix A.6.2) with the understanding that the process will be iterative and evolving.⁷³

⁷¹ Final WG Report at 89-90.

⁷² Final WG Report at 90.

⁷³ Final WG Report at 90.

Figure 3: Proposed Distribution Planning and NWA Consideration Process (as of February 2019)



44. The NWA WG learned about distribution system planning processes and tools in other jurisdictions and developed a table summarizing distribution system planning frameworks in California, New Jersey, Rhode Island, Maryland, and New York.⁷⁴ Several stakeholders encourage Pepco to develop an open and transparent distribution planning process that involves stakeholder engagement and identify drivers for enhanced distribution system planning in the District.⁷⁵ During the January 2019 NWA meeting, Pepco shared a proposed distribution system planning process that includes a stakeholder-informed process for collecting input from stakeholders on load forecasting and NWA considerations in constrained areas of the distribution system.⁷⁶ Pepco filed a revised version of the “Proposed District of Columbia Stakeholder-

⁷⁴ See Table 5.7 in the Final WG Report at 91.

⁷⁵ Final WG Report at 91.

⁷⁶ Final WG Report at 92.

Informed Utility Distribution System Planning and NWA Consideration Process” in February 2019.⁷⁷

45. DOEE suggests that the initial design of the proposed DSP be modified as follows: In between the Load Impact Factors (“LIF”) and the Locational Constraint Reports (“LCR”), and in between the LCR and the NWA RFP, “there should be a brief opportunity for review by government agencies to ensure that Pepco accurately incorporated the new data (provided by stakeholders) for LIF and the information in LCR are appropriately (*i.e.*, not unduly restrictive or inflexible) reflected in the NWA RFP.” DOEE “strongly believes that these minor additions, which should not add more than 1 to 2 weeks per review to Pepco’s process, would be key to ensuring that the new process provides a modicum of transparency and accountability without externalizing the planning function away from Pepco. Without these additions, the planning process runs the risk of remaining [the] utility black box that it currently is.”⁷⁸

46. The Commission agrees with DOEE that there could be some potential benefit to the public if given an opportunity to participate in the DSP process between the LIF and LCR phases. Therefore, the Commission will require Pepco to host an informational meeting for all interested persons between the LIF and LCR phases of the DSP process where Pepco can explain its methodology for calculating its load forecast and allow for comments and questions.⁷⁹ Thereafter, the need and timing of Pepco’s infrastructure project or NWA solution will be reviewed in a rate case to determine whether costs should be recovered. Thus, it will be in Pepco’s best interest to address questions regarding its methodology to ensure cost recovery. Moreover, any questions or disputes among stakeholders that occur during the informational meetings will be resolved by the Commission.

47. The proponent(s) of stakeholder intervention between the LCR and NWA RFP stages failed to articulate a convincing rationale for this additional step. However, we acknowledge DCCA’s position that, although Pepco’s proposal is a welcome step forward, the Commission should make changes to ensure that the public interest, including the District’s Clean Energy legislation and goals, is always visibly placed foremost.⁸⁰ In that regard, the Commission will require that the Locational Constraints Report and the parameters for NWA solutions included

⁷⁷ Final WG Report at 94. Although this revised process was initially proposed by Pepco, it is a proposal that the entire NWA WG iterated upon and deliberated over the course of two months, both during and outside of the working group meetings.

⁷⁸ Final WG Report at 99.

⁷⁹ We notice that load forecast is an important parameter in determining the “need” and “timing” of capital expenditure projects for load constrained areas. The public should be offered a chance to fully understand the improvement Pepco intends to make with respect to its load forecast.

⁸⁰ Final WG Report at 97.

in the Locational Constraints Report be submitted for review and approval by the Commission at least for the first project under the new DSP process.⁸¹

48. Considering the changes, the Commission directs Pepco to revise its DSP accordingly, and to file the revised Plan within 90 days from the date of this Order.

49. While we appreciate Exelon and Pepco for developing this industry-leading, more open and transparent stakeholder-informed DSP process, we share the concern expressed by several NAWWG members regarding Pepco's 5-year implementation timeframe for this new process (solutions in service from 2025 to 2029).⁸² We understand that Pepco's projects are planned on a five-year ahead basis, and, as such, it may not be possible to apply this new process to any projects for which, for example, a Notice of Construction ("NOC") has been filed and is currently under consideration by the Commission. However, we see no reason to delay implementation of the new process as it may apply to projects not as far along in Pepco's planning or implementation process. The Commission, therefore, directs Pepco to submit a filing within 60 days from the date of this Order that: (1) provides a list of all projects that are currently under review or that have been budgeted for in their 5 year planning process; and (2) that accelerates the implementation process of this new DSP process to cover projects starting from 2023, or 3+ years, as suggested by DOEE.⁸³

4) NWA R-5.2.4: Commission to Establish Advanced Inverter Definition

50. The Final WG Report also recommends that the Commission should consider the final version of the NWA Working Group's "advanced inverter" definition and add it to the list of MEDSIS definitions within *Formal Case No. 1130*:

"Advanced inverters" are inverters with a digital architecture, bidirectional communications and software that enable functionalities that provide autonomous grid support and enhance system reliability along with the capability to adjust their operational set points in response to the changing characteristics of the grid through dedicated communications protocols and standards. Advanced inverters must enable at the minimum, the following functionalities, as defined in IEEE 1547-2018: dynamic and real power support, voltage ride-through, frequency ride-through, voltage support, frequency support, and ramp rates.⁸⁴

⁸¹ While we are adding this additional safeguard, it is unclear whether continued review and approval of Pepco's Locational Constraints Report will add efficiencies to the process. Thus, our requirement for continued Commission approval of the LCR may be rescinded in the future depending upon the circumstances.

⁸² See, e.g., the positions of DCCA and DOEE in the Final WG Report at 98-99.

⁸³ Final WG Report at 99.

⁸⁴ Final WG Report at 102.

51. As background on this matter, on November 3, 2017, the Commission proposed an amendment to Chapter 40 (District of Columbia Small Generator Interconnection Rules) that included a proposed definition of “smart inverter.” On September 26, 2018, the Commission removed the definition from the proposed rulemaking and directed the consultant-led working group process in the MEDSIS initiative to develop a definition of smart inverter, specifically designating the task to the NAWWG. On October 25, 2018, the stakeholders reached consensus that the alternative term — “advanced inverter” — shall be considered rather than “smart inverter.” This definition has gone through several iterations, and in February 2019, the MEDSIS consultants developed the recommended final definition for the Working Group’s consideration.⁸⁵ While stakeholder support for this definition was near unanimous,⁸⁶ to be consistent with our decision on NWA Recommendation 5.2.1 (definition of NWA), we also include this definition in the proposed NOPR at Attachment E and direct Commission Staff to issue and finalize the NOPR within 180 days of the date of this Order.

5) NWA L-5.2.5: Stakeholder Input on Commission Rules Around DER Ownership

52. The first NWA Learning proposed by the NAWWG is that stakeholders should have input on Commission rules regarding ownership of DERs.⁸⁷ The Commission previously determined that the issue of utility ownership of storage fell outside the scope of *Formal Case No. 1050* (interconnection standards) and directed the NAWWG to consider utility ownership of energy storage devices and other DERs and to submit its recommendation for Commission consideration in the final working group report.⁸⁸

53. There was general agreement among the stakeholders that the Commission should classify energy storage by its primary function and regulate it accordingly and that utilities should, among other things: (1) be allowed to operate energy storage assets in wholesale markets; (2) be allowed to own front-of-the-meter energy storage assets for providing grid reliability services; (3) allowed to control energy storage assets behind-the-meter if they are to be used as a grid reliability asset and only if customers and third party providers consent to such control; and (4) be allowed to own solar PV, wind, biomass, waste-to-energy, cogeneration and/or micro turbine assets as long as it is not for the purposes of selling retail electricity to customers. On the other hand, there was also general agreement among the stakeholders that utilities should not be allowed to own storage assets behind-the-meter at this time.⁸⁹

⁸⁵ Final WG Report at 102-104.

⁸⁶ Final WG Report at 104.

⁸⁷ Final WG Report at 105-113.

⁸⁸ *RM40-2017-01*, and *Formal Case No. 1050*, Order No. 19676, ¶ 17, rel. September 19, 2018.

⁸⁹ Final WG Report at 108-109.

54. Although there was general agreement on the above list by the stakeholders, most of them took varying positions favoring this Learning with a multitude of conditions, modifications, or objections.⁹⁰ As a result of these varying views, the Commission believes this matter to be ripe for initiation of a notice of inquiry (“NOI”) to address ownership of energy storage devices and other DERs by setting out the recommendations from the Final WG Report, with appropriate modifications, and asking for public comment. The Commission, therefore, direct Commission Staff to issue a conforming NOI within 90 days from the date of this Order. The Commission can then issue a NOPR based on the comments received in response to the NOI.

6) NWA L-5.2.6: Need for Demonstrating NWA Projects in the District

55. The second Learning proposed by the working group is the need for demonstrating NWA projects in the District.⁹¹ The NWA WG stakeholders generally agree that the contract mechanisms and earning structures of NWA projects should be tested and demonstrated through NWA pilot projects. Three potential pilot or demonstration projects are proposed.⁹² The NWA pilot can test several key components of NWA projects including but not limited to demand-side management, aggregated solar PV and energy storage, advanced inverter functionalities, NWA business models and ownership structures and appropriate NWA contract mechanisms.⁹³ We agree with the conclusion in the Final WG Report that there is a real opportunity in the District to explore NWA pilot and demonstration projects in the District.⁹⁴ The Commission will, therefore, include an NWA pilot in the non-exhaustive list of Pilot Project concepts as an outcome of the 5.6.2 (Pilot Projects).

7) NWA R-5.2.7: Commission to Establish Stakeholder Working Group on IEEE 1547-2018 Standards and Advanced Inverter Deployment

56. The final NWA WG recommendation is that the Commission should establish a stakeholder working group to plan deployment of advanced inverters and implementation of IEEE 1547-2018 as specified in DCCA’s proposal in Appendix A.6.1.⁹⁵

57. The Commission already has a working group that addresses issues regarding interconnection matters in *Formal Case No. 1050*. Additionally, in our recently finalized

⁹⁰ Final WG Report at 109-113.

⁹¹ Final WG Report at 113-117.

⁹² Final WG Report at 114. The proposed pilot projects are: 1. Grid 2.0/DCCUB’s comprehensive NWA pilot project described in Appendix A.6.3 of the Final WG Report; (2) Urban Ingenuity/DOEE’s solar saturation solution project described in Appendix A.6.5 of the Final WG Report; and (3) Sunrun’s “Bring Your Own Device” (BYOD) pilot project described in Appendix A.6.6 of the Final WG Report.

⁹³ Final WG Report at 115.

⁹⁴ Final WG Report at 115.

⁹⁵ Final WG Report at 117.

interconnection rules, the Commission mandates compliance with the IEEE 1547-2018 Standard, which requires DERs to be capable of providing specific grid supportive functionalities relating to voltage, frequency, communication and controls. Pepco is reviewing the new IEEE standard and plans to adopt it as soon as the associated Underwriters Laboratory certification testing is completed. DCCA proposed that the Commission should establish a stakeholder working group to plan the deployment of advanced inverters and IEEE 1547-2018 standards by 2022 to meet distribution needs aligned with the District's statutory clean energy and DER mandates. This working group's scope would include choice of functionalities to be adopted and related tracking, rulemaking, policy considerations and stakeholder education, which is described in more detail in DCCA's proposal included in Appendix A.6.1. There is general agreement that such a group would require considerable technical expertise, including from a range of technically-versed stakeholders, to determine specific standards and settings.⁹⁶ Most of the stakeholders addressing this recommendation support the proposal; the only significant caveat is that the working group would require the assistance of experts as well as additional, extensive education of the parties.⁹⁷

58. Despite support for establishing another working group to consider this matter, we believe the comments of EEI are persuasive. EEI supports the recommendation but also notes that it may be unnecessary to convene a working group to discuss the implementation of IEEE 1547-2018, as most aspects of its implementation are the responsibility of Pepco. The implementation of this standard will require extensive education of the different parties, but EEI does not believe that a stakeholder group, supposedly similar to the one formed in the MEDSIS proceeding, would have the adequate expertise or resources to assist in that area. Other stakeholders also stress the technical complexity of the application of IEEE 1547-2018 and the apparent need for expert guidance. Further, EEI believes that forming a working group to discuss goals for advanced inverters deployment is unnecessary at this point. EEI suggests that the deployment of smart inverters should be tied to the deployment of the resources that they support. EEI also maintains that discussing the deployment of smart inverters would be tantamount to discussing the deployment of DERs, which a stakeholder working group should not do in the absence of additional policy or regulatory guidance and direction. EEI believes that educational workshops will be more effective in educating stakeholders and in soliciting their input when and where it may be needed.⁹⁸

59. The Commission recognizes that there is a significant difference between implementing the IEEE standard and developing the functionalities to incorporate the standards. These are decisions that must be made by the Commission and PJM. Thus, the need for technical expertise, plus the fact that the Commission currently mandates compliance with IEEE 1547-418, makes the convening of a new working group on this matter unnecessary. Accordingly, we instead direct the use of educational workshops, which can be conducted live or via video or web conference, within *Formal Case No. 1050*, when appropriate relative to the status and progress of the standards' implementation, to inform stakeholders of developments in the implementation of

⁹⁶ Final WG Report at 117.

⁹⁷ Final WG Report at 117-118.

⁹⁸ Final WG Report at 118.

these standards. We direct Commission Staff, in conjunction with Pepco, to evaluate the current status of implementing these standards and to arrange for the first educational workshop to be scheduled and held within 120 days from the date of this Order.

RATE DESIGN

C. Working Group 3 – Rate Design

60. The Rate Design Working Group (“RDWG”) investigated the impact of rate design on DER adoption, evaluated alternative rate designs, and addressed the basis for setting rates and proper cost causation and realization. The RDWG discussed rate structures and alternative rate designs and regulatory models for the purpose of achieving the MEDSIS vision. Additionally, the RDWG evaluated alternative rate designs and regulatory models with respect to, among other things, fundamental principles of ratemaking (e.g., cost causation, rate gradualism, etc.) as well as their effect on DER adoption.⁹⁹ The key questions that were to be addressed by the RDWG and the desired outcomes are specifically listed on pages 30-31 of the Final WG Report.¹⁰⁰

61. Discussion of the RDWG Recommendations and Learnings are set forth in Chapter 5.3 of the Final WG Report (pages 119-140) and consist of two (2) Recommendations and one (1) Learning.

1) RDWG R-5.3.1: Commission to Reconvene Residential Dynamic Pricing Program Working Group

62. The RDWG’s first recommendation is that the Commission reconvene a working group to develop a specific residential dynamic pricing program.¹⁰¹ The recommendation states:

By October 2019, the DCPSC should reconvene the Dynamic Pricing working group that previously existed in the District and direct them to formulate the details of a new residential dynamic pricing program(s). The working group should be convened for a defined time frame – ideally with the goal of developing a program(s) that can be submitted for approval by the DCSPC in time for the 2020 cooling season. The DCPSC should conduct ongoing monitoring of the dynamic pricing program, once implemented, to ensure program elements are evolved, as needed, to address PJM

⁹⁹ Final WG Report at 17, 30.

¹⁰⁰ As stated previously, Chapter 4 of the Final WG Report (pages 17-52) provides a complete summary of the working group process for each working group, including the charters, stakeholders, topics and documents that influenced the working group process. Chapter 5 (pages 53-238) is the output of that process for each group.

¹⁰¹ Final WG Report at 124. Dynamic Pricing is the practice of varying the price for a product or service to reflect changing market conditions, in particular the charging of a higher price at a time of greater demand.

market changes, increasing penetration of DERs, program role as [an] NWA to system build out, and customer feedback.¹⁰²

63. Stakeholder positions on this recommendation can be found on pages 121-123 of the Final WG Report. AOBA opposes the recommendation pending further analysis of the benefits of a dynamic pricing program to distribution systems.¹⁰³ EEI supports the recommendation but expresses concerns about a working group looking at “specific features of an electric rate or pricing program.”¹⁰⁴ Arcadia Power, DCCA, DCSEU, DOEE, General MicroGrids, Grid 2.0/DCCUB/Sierra Club, GRID Alternatives, Gridwise Alliance, NCLC, OPC, Pepco, Sunrun, and WGL Energy support the recommendation with various conditions or caveats related to details of a dynamic pricing program and the scope of the Dynamic Pricing Working Group’s mandate. As Pepco noted to the RDWG in its February 2019 presentation, neither Pepco nor the District are new to the area of dynamic pricing.¹⁰⁵ The Commission agrees with the RDWG’s recommendation to convene a Dynamic Pricing Working Group to begin work in the fourth quarter of calendar year 2019 for a period not to exceed 12 months. To facilitate the Working Group’s efforts, the Commission directs Pepco to file with the Commission a strawman residential dynamic pricing proposal (*e.g.*, Critical Peak Rebate like in Pepco MD or other forms of dynamic pricing, including time-of-use rates), along with an explanation of all identified benefits and costs, as well as any PJM market revenue concerns, within 60 days of the date of this Order.¹⁰⁶ Pepco should also identify how its proposal compares to dynamic pricing programs at other Exelon utilities. Interested persons should file any comments within 30 days of Pepco’s filing. The Commission will issue a Public Notice convening the Dynamic Pricing Working Group within 30 days of the date of Pepco’s filing. Participation in the Dynamic Pricing Working Group shall be open to the public, including new stakeholders not engaged with the RDWG.

2) RDWG R-5.3.2: Commission to Initiate a Value of DER and Value of Grid Study

64. The RDWG’s second recommendation is that the Commission initiate a Value of DER and Value of Grid Study utilizing MEDSIS funds.¹⁰⁷ This recommendation provides:

[The Commission] hire an outside consultant to produce a methodology for determining the locational value of DER with a

¹⁰² Final WG Report at 119.

¹⁰³ Final WG Report at 121.

¹⁰⁴ Final WG Report at 121.

¹⁰⁵ Final WG Report at 119-120.

¹⁰⁶ Pepco should review and address, as appropriate, the Federal Energy Regulatory Commission’s recent price responsive demand order. *See PJM Interconnection, L.L.C.*, “Order Rejecting Tariff Revisions,” 167 FERC ¶ 61,268 (2019).

¹⁰⁷ Final WG Report at 119.

target completion date of 2021. The costs of the study should be paid from the MEDSIS pilot funds. Completion of the study should not impact the schedule for conducting other MEDSIS pilot projects.¹⁰⁸

65. Stakeholder positions on this recommendation can be found on pages 126-129 of the Final WG Report. AOBA, DCSEU, General MicroGrids, Grid 2.0/ DCCUB/ Sierra Club, Grid Alternatives, Gridwise Alliance, NCS, OPC, and WGL Energy are broadly supportive of the general concept of a Value of DER Study. Pepco proposes, and the stakeholders agree, that the Value of DER Study be paired with a Value of the Grid Study to allow for a comprehensive view of distribution system.¹⁰⁹ DCCA sees these studies as components of the Benefit-Cost Analysis in Recommendation 5.1.2 and the carbon footprint metric in Recommendation 5.1.1.¹¹⁰ DOEE supports the Value of DER Study and believes it is a “critical piece to design an appropriate framework for incentivizing DER integration in a way that provides the greatest benefit to the existing grid.”¹¹¹ Sunrun, with the support of DC SUN, “supports efforts to identify and unlock the full value of DER but must be weighed against other MEDSIS goals and projects.”¹¹² The RDWG identifies the costs of the studies as a significant concern given that no immediate problem was identified with current DER compensation and considering MEDSIS funds are limited.¹¹³ DOEE recommends, and OPC supports, capping the Value of DER Study at \$500,000.¹¹⁴ Given this is proposed expenditure of MEDSIS Funds, the Commission defers consideration of the Value of DER Study and Value of the Grid Study to the Pilot Project Phase, where limited MEDSIS Funds can be competitively allocated. The proponents of these studies may submit project proposals during the Pilot Project process.

3) RDWG L-5.3.3: Performance Based Regulation in the District

66. The only RDWG Learning is for the Commission to consider Performance Based Regulation (“PBR”) in the District, as detailed on pages 129-137 of the Final WG Report. Stakeholder positions on this recommendation can be found on pages 137-140 of the Final Report. The RDWG discussed potential performance incentive mechanisms (“PIMs”) acknowledging that, while PIMs are a key component to PBR, they must be properly designed to support both a financially healthy utility and drive outcomes consistent with the MEDSIS Vision and the District’s energy policies.¹¹⁵ On May 30, 2019, Pepco filed a multiyear rate application, that

¹⁰⁸ Final WG Report at 124.

¹⁰⁹ Final WG Report at 124.

¹¹⁰ Final WG Report at 126.

¹¹¹ Final WG Report at 126.

¹¹² Final WG Report at 129.

¹¹³ Final WG Report at 125.

¹¹⁴ Final WG Report at 126.

¹¹⁵ Final WG Report at 132.

incorporates PBR, for the Commission's consideration in *Formal Case No. 1156*.¹¹⁶ Given Pepco's pending Application, the Commission moves consideration of the PBR Learning in *Formal Case No. 1156* and any other related proceedings.

CUSTOMER IMPACT

D. Working Group 4 – Customer Impact

67. The Customer Impact Working Group (“CIWG”) discussed the potential impacts of grid modernization on customers and what preventative measures must be taken to engage, protect, and inform customers as this process proceeds, including changes to the CBOR and the development of marketing strategies geared towards customer education.¹¹⁷ To better understand the climate of the issues, the CIWG had the New York Department of Public Service give a presentation on the costs and benefits of DERs and implications of allocating certain grid modernization costs across customer classes.¹¹⁸ The CIWG also considered data access and protection issues and reviewed customer education and engagement programs, including low-income customer programs, from around the country.¹¹⁹ Overall, engagement and customer education around the likely impacts of the MEDSIS process on District ratepayers and the implementation of robust customer protection measures were of utmost importance to the CIWG.

1) CIWG R-5.4.1: Commission to Enhance and Consolidate Customer Education Materials

68. The CIWG recommends that the Commission consolidate energy educational material along with information on MEDSIS in one place on our website. The CIWG also recommends that this information be easily accessible with links to complementary information on the DOEE, DCSEU, Pepco, WGL, and OPC websites and should be supported by clear, consistent, and persistent communications to consumers through the Commission's marketing and promotion channels.¹²⁰ The CIWG stated that customers can be skeptical of information being provided in a marketing context and that customers may not always know where to find educational materials or know who to trust for this information.¹²¹ The CIWG also cautions that,

¹¹⁶ *Formal Case No. 1156, In the Matter of the Application of Potomac Electric Power Company for Authority to Implement a Multiyear Rate Plan for Electric Distribution Service in the District of Columbia, Application of Potomac Electric Power Company for Authority to Implement a Multiyear Rate Plan for Electric Distribution Service, filed May 30, 2019.*

¹¹⁷ Final WG Report at 41-43.

¹¹⁸ Final WG Report at 41.

¹¹⁹ Final WG Report at 42-43.

¹²⁰ Final WG Report at 140.

¹²¹ Final WG Report at 141.

inasmuch as a variety of organizations provide information to customers, confusion and uncertainty may arise regarding what information is correct and who can be trusted. Additionally, referring to OPC's categorization of District customers as either: (1) Legacy Consumers; (2) Present Day Consumers; or (3) Consumers of the Future, the CIWG recommends that treatment of these customers regarding education and marketing be tailored to the group's particular needs.¹²²

69. The majority of the stakeholders support this CIWG recommendation. The Commission also supports this recommendation to consolidate energy educational material along with information on MEDSIS in one place on the Commission's website and agrees that this information should be easy to access and include appropriate referral links to outside resources. Accordingly, the Commission directs that an initial review of the currently available information be conducted by the Commission's Office of Consumer Services ("OCS"). OCS shall submit an Action Plan, after consulting the Utility Discount Program Education Working Group, to the Commission within 30 days of the date of this Order indicating what changes need to be made to the website to implement this recommendation, including whether an outside service provider is needed. The Commission further directs that the approved updates to the Commission's website should be completed within 120 days of the date of this Order. We also direct that stakeholders be responsible for keeping the information on their respective websites up-to-date so that District residents are able to fully realize the benefits of this effort. As proposed by Pepco, in addition to information from DOEE, DCSEU, Pepco, and OPC, we will also include information from, or pertinent links to, WGL and the District of Columbia Department of Consumer Regulatory Affairs ("DCRA") on the website. Finally, as noted by Grid Alternatives, the Commission also believes that marketing resources should be dedicated to raising awareness of the availability of low-income programs in the District. This matter will be discussed in CIWG Recommendation 5.4.5 below.

2) CIWG R-5.4.2: Commission to Consolidate and Enhance Competitive Energy Supplier Information for District Customers

70. The CIWG recommends that the Commission create a new stand-alone website or enhance our existing website to house up-to-date competitive energy supplier offers as well as energy education material that would aid customers in evaluating offers. The CIWG also recommends that a marketing campaign should accompany the availability of this new website to increase customer awareness of the site.¹²³ In support of this recommendation, the CIWG notes that, while retail competition has been in place in the District for almost 20 years, few residential customers have migrated to competitive electricity providers (only 14.6% of customers have switched to competitive suppliers, which represents 15.7% of total residential load). Conversely, non-residential customers have largely switched to a competitive supplier (35.6% of customers representing 82.4% of total commercial load).¹²⁴ The CIWG believes that many factors contribute to the lack of switching among residential customers, among those being the difficulty many

¹²² Final WG Report at 141.

¹²³ Final WG Report at 143.

¹²⁴ Final WG Report at 143, citing Pepco's December 2018 Monthly Marketing Report.

District customers face in evaluating competitive offers and the shortage of trusted energy educational material that would help them evaluate offers. Additionally, OPC claims that residential customers have been impacted by marketing techniques from competitive suppliers that, in some cases, have caused confusion and made customers skeptical of competitive offers. Thus, OPC is of the opinion that a compilation of competitive service offerings in one location that is provided by a trusted source would be welcomed by customers.

71. The majority of stakeholders support this recommendation, with WGL Energy further recommending that guidelines be identified and developed on updating and maintaining the website and for ensuring the prices are up-to-date and accurate.¹²⁵ The Commission supports the thrust of this recommendation but also acknowledges: (1) that much of the identified information is currently available on the Commission's website, including (a) how to pick a supplier, (b) a comparison of energy supplier offerings, (c) information on how to deal with solicitations, (d) bill calculators, and (e) bill comparisons; and (2) that this information could be presented in a more user-friendly manner as suggested by the CIWG.

72. The Commission does, however, agree with the CIWG and its reasoning that our existing website needs major revisions, if not total reconstruction, to house up-to-date competitive energy supplier offers as well as energy education material that would aid customers in evaluating offers. We also agree with the CIWG that a marketing campaign should accompany the availability of this revised website to increase customer awareness of the site. After reviewing other state commissions' websites (including the successful Pennsylvania Power Switch Program),¹²⁶ as well as how those websites were established and funded, we conclude that establishing and maintaining such a website using Commission operating funds is in the best interests of District ratepayers who will benefit from being fully informed in evaluating competitive energy offers.

73. Based on the above, we direct the OCS, in conjunction with the Commission's Office of Technical and Regulatory Analysis ("OTRA") to develop an interactive micro-website linked to the Commission's website to house up-to-date competitive energy supplier offers as well as energy education material that would aid customers in evaluating offers as discussed in the Final WG Report. We also direct OCS and OTRA to design a marketing campaign to accompany the launch of this new micro-website to increase customer awareness of the site. The results of these directives shall be submitted to the Commission for review and approval within 180 days from the date of this Order.

3) CIWG R-5.4.3: Commission to Work with Pepco to Enhance Customer Data Access and Protection

74. The CIWG recommends that the Commission direct Pepco to proceed with investigating the implementation of the Green Button Connect My Data ("CMD") functionality

¹²⁵ Final WG Report at 145.

¹²⁶ <https://www.papowerswitch.com/>

for residential customers in accordance with standards established by the Green Button Alliance.¹²⁷ The CIWG further recommends that the Commission review Pepco's existing data security standards for adequacy against the CMD standard and that the Commission should ensure third-parties seeking access to customer data via an electronic interface with Pepco adhere to Pepco's cybersecurity standards for protection of this data. The CIWG also recommends that the Commission: (1) audit third parties' systems and processes to ensure compliance with these standards; (2) ensure utilities and energy service providers develop policies and practices to address the integrity and confidentiality of customer data; and (3) ensure the information security of all interfaces, devices and operations involving customer data sharing includes, but is not limited to, the following: (a) an opt-out data sharing policy for aggregated data to protect customer privacy and personally identifiable information ("PII"), and (b) an opt-in customer data sharing agreement for PII data.¹²⁸

75. Generally, stakeholders support this recommendation with some clarifications. For example, Arcadia Power notes that "Pepco should implement the entire Green Button Connect Platform, including the 'retail customer' schema that includes customer and billing information" and "ensure third parties seeking access to customer data via an electronic interface with Pepco adhere to Pepco's cybersecurity standards."¹²⁹ Grid 2.0, DCCUB, and Sierra Club note that "Greenhouse gas [] generation metrics [should] be included so that D.C. customers can understand their utility GHG footprint, and allow them to compare and control their GHG emissions."¹³⁰ DOEE notes that "aggregated and anonymized ('A&A') customer data should be useful to identifying [energy efficiency ('EE') and distributed resource ('DR')] and other energy service opportunities."¹³¹ Pepco notes that the Commission should "consider directing Pepco to exercise NDAs with [] third parties in order to give the Commission insight into and confidence regarding third party security and privacy standards and practices," while warning that the "NDA would in no way transfer to Pepco responsibility for a violation by or breach of a third party."¹³²

76. The Commission supports this recommendation because we strongly believe that giving residential customers access to CMD, similar to commercial customers, will foster innovation and encourage better use of customers' energy usage data made available by Advanced Metering Infrastructure ("AMI") technology. Furthermore, broader customer data access is key to facilitating greater usage awareness, DER penetration, and maximizing benefits to all

¹²⁷ Final WG Report at 146. The Green Button initiative is an industry-wide effort to provide electricity customers with easy access to their energy usage data in a standardized, consumer-friendly, and computer-friendly format. With Green Button Connect My Data, consumers can choose which service providers to share their data with automatically. Currently, in the District of Columbia, Green Button Connect My Data is available to commercial customers, but not to residential customers.

¹²⁸ Final WG Report at 146.

¹²⁹ Final WG Report at 148.

¹³⁰ Final WG Report at 148.

¹³¹ Final WG Report at 148.

¹³² Final WG Report at 149.

ratepayers. As part of our directive that Pepco move forward with investigating this matter, we believe information around Pepco's current experience with CMD and related data sharing matters is warranted. Therefore, the Commission directs Pepco to report on implementation of the Green Button Connect My Data and related customer data matters, including Pepco's data aggregation sharing practices, data anonymization feasibility, and the feasibility of including GHG emissions data through the CMD platform as outlined in Appendix F to this Order. The Commission denies the recommendation that the Commission audit third parties' systems and processes to ensure compliance with Pepco's cybersecurity standards as this is a responsibility of the utility. We agree that Pepco should execute NDAs with third parties for assurances on security and privacy standards. The Commission also agrees with the recommendation from Arcadia Power that Pepco should implement the entire Green Button Connect platform for residential customers and we include this consideration in the reporting requirement. The Commission directs Pepco to provide the report within 180 days from the date of this Order.

4) CIWG R-5.4.4: Commission to Direct Pepco to Develop Energy Efficiency Programs for Master Metered Apartments

77. The CIWG recommends that the Commission direct Pepco to develop EE programs that encourage participation by residents in master-metered apartment ("MMA") buildings. The CIWG adds that incentive-based programs need to offer measures targeted at both landlords and renters so both can benefit from these programs. The CIWG also recommends that any program developed be designed and implemented in coordination with EE programs offered by the DCSEU and other District organizations, especially programs targeted at low-income populations.¹³³

78. The CIWG discussed the wave of EE and financing programs being developed to address MMA buildings and related issues such as sub-metering prohibitions that arise with such endeavors. The CIWG notes that DOEE and DCSEU are currently engaging in a pilot program to review related constraints of MMAs, but indicates that the program will not be completed until the end of 2019.¹³⁴ OPC notes that "in the District there are constraints on what areas can be sub-metered which are the jurisdiction of other District government agencies" and not the Commission.¹³⁵ The CIWG believes opportunities are available to create programs that allow both renters and landlords in master-metered buildings to benefit from energy efficiency.¹³⁶ Generally, the stakeholders are in support of this recommendation, but AOBA notes the need for "an amendment to existing law to authorize the use of sub metering and/or the use of energy allocation systems to improve the sensitivity of end users to the costs of utility services in master-metered apartments."¹³⁷ OPC dissents noting that "Pepco can develop EE programs currently and as

¹³³ Final WG Report at 149.

¹³⁴ Final WG Report at 150.

¹³⁵ Final WG Report at 150.

¹³⁶ Final WG Report at 151.

¹³⁷ Final WG Report at 151.

supported by the passage of the Clean Energy DC Act, so there is no need for the Commission to direct Pepco to develop EE programs.”¹³⁸

79. The CIWG recommends that the Commission direct Pepco to develop incentive-based EE programs to encourage MMA participation. The Commission approves this recommendation in part. First, the Commission approves, in accordance with the Clean Energy DC Act, Pepco submitting EE programs for the Commission’s consideration that do not duplicate programs offered by the DCSEU.¹³⁹ Second, regarding the recommendation that the Commission direct Pepco to establish EE programs that would allow residential submetering in master-metered buildings, there is confusion as to the nature of the prohibition on residential submetering in the District. The Commission banned all submetering in 1928.¹⁴⁰ In 2008, when the Council passed the Clean and Affordable Energy Act, it only overturned the Commission’s 1928 submetering ban with respect to nonresidential rental units.¹⁴¹ To gauge interest in revising the Commission’s 1928 ban on residential submetering and assess under what conditions residential submetering might be appropriate, the Commission directs Commission Staff to issue an NOI on residential submetering within 30 days from the date of this Order.

5) CIWG R-5.4.5: Commission to Enhance Customer Participation in Low-Income Programs

80. The CIWG recommends that the Commission enhance customer participation in low-income programs by: (1) ensuring programs are created that target underserved communities for solar, electric vehicle, energy efficiency, time variant rates, and demand response programs so long as they do not have adverse impacts; (2) incorporating a scoring criteria in the Pilot Project Selection and Scoring process that assigns points and/or sufficiently considers projects that benefit low-income groups; (3) considering the development of programs that allow small businesses to participate in assistance programs; (4) enhancing the visibility of low-income programs; (5) considering the possibility of transferring customer data across initiatives; and (6) considering

¹³⁸ Final WG Report at 151.

¹³⁹ Clean Energy DC Act at 15. We find it noteworthy that the Commission currently implementing a Deep Energy Retrofit energy efficiency program for master-meter apartments in *Formal Case No. 1148* with the \$11.25 million from the Pepco-Exelon Merger. Additionally, the Clean Energy DC Act recently directed DOEE to create Building Energy Performance Standards along with the Building Energy Performance Standard Task Force, which was created to advise DOEE on creation of an implementation plan for Building Energy Performance. The Commission will continue to monitor the development of these standards and their nexus, if any, to the Commission’s regulatory role for implementation purposes.

¹⁴⁰ See *Formal Case No. 152, In the Matter of a Reduction in the Rates of the Potomac Electric Power Company*, Order No. 737 at 12, rel. December 31, 1928. (“It is expressly understood and agreed that electric service furnished to the consumer shall be for his (hers or their) own use and may not be remetered (or submetered) by the consumer for the purpose of selling electric service to another or others.”). Affirmed in *Lewis, et al. v. Potomac Electric Power Company*, 64 F.2d 701 (D.C. Cir. 1933).

¹⁴¹ DC Code § 34-1552 (a) (2019) (Supp. 2008) (“The Commission shall promulgate rules, including standards, under which any owner, operator, or manager of a building which is not individually metered for electricity or gas for each nonresidential rental unit may install submetering equipment or energy allocation equipment . . .”).

future directives to enable more District residents to qualify for need based assistance programs and to incorporate other disadvantaged populations.¹⁴²

81. The stakeholders overall support this recommendation with various exceptions, conditions and additions.¹⁴³ DOEE, while in support of the recommendation, noted that “[w]here possible . . . the reduction of duplication and coordination across low-income programs” should be considered.¹⁴⁴ EEI mentioned that while they support equal opportunity and access to technology programs for all District residents, they recognize that “there is limited precedent for utilities targeting solar at low-income customers because of the high-cost, when those customers would be better served through lower-cost, utility-scale renewables and/or bill support programs.”¹⁴⁵ As pointed out by the CIWG, low-income populations would likely prioritize the principle of “affordability” over other MEDSIS principles.¹⁴⁶ The Commission takes no issue with that conclusion and also recognize, as did the CIWG, that expanding DER opportunities in the District, especially DERs for public infrastructure, can result in benefits to low-income customers and potentially increase access to public/private services like buses, trains, and ride share programs of importance to that class of customers.¹⁴⁷

82. This recommendation provides more guidance on necessary considerations to achieve the goal of greater low-income participation than actionable recommendations. However, the recommendation that the Commission enhance the visibility of low-income programs through the Commission Newsletter and other marketing outlets as well as creating an easily accessible, consolidated list of low-income programs on the Commission’s website, is actionable and appropriate.¹⁴⁸ Therefore, the Commission approves the CIWG recommendation to enhance visibility of low-income programs and the creation of a consolidated offerings list on the Commission’s website and directs the Office of Consumer Services to implement the recommendation in conjunction with our Recommendation 5.4.1 directive, above, within 180 days from the date of this Order.

¹⁴² Final WG Report at 152-153.

¹⁴³ Final WG Report at 155-157.

¹⁴⁴ Final WG Report at 155.

¹⁴⁵ Final WG Report at 155.

¹⁴⁶ Final WG Report at 154.

¹⁴⁷ For example, in Order No. 19898 in *Formal Case No. 1130*; and *Formal Case No. 1155, In the Matter of the Application of the Potomac Electric Power Company for Approval of its Transportation Electrification Program*, rel. April 12, 2019, the Commission, among other things, directed Pepco to provide “make-ready” infrastructure for public electric vehicle (“EV”) charging and public transportation charging to facilitate the deployment of public electric vehicle charging station (“EVCS”). This can benefit low-income customers by increasing available clean lower-cost transportation alternatives.

¹⁴⁸ Final WG Report at 152.

83. In addition, the Commission directs that the Office of Consumer Services consider the goals outlined by the CIWG and submit an Action Plan, including additional actionable recommendations, on how to enhance customer participation in low-income programs in the District within 90 days from the date of this Order.

6) CIWG R-5.4.6: Commission to Revise the CBOR to Support the MEDSIS Pilot Projects Phase

84. The CIWG recommends that the Commission review the Consumer Bill of Rights (“CBOR”) and update it to address the MEDSIS Vision for a modern grid in time to support the Pilot Projects phase.¹⁴⁹ More specifically, the CIWG request that the Commission’s revised CBOR rules address among other things, customers rights and responsibilities and adjudication of complaints that may arise in MEDSIS process.¹⁵⁰ Additionally, the CIWG also recommend that the Commission appropriately develop outreach programs to inform customers about the impact of the MEDSIS process as a whole.¹⁵¹ CIWG members generally support this recommendation.¹⁵² OPC supports this recommendation. EEI recommends that the CBOR updates should “ensure customers are notified and informed about their rights when participating or impacted by MEDSIS pilot projects [and] that customers should have clear guidance for initiating complaints” during the pilot project phase.¹⁵³ Pepco notes that “the types of pilot projects listed [in the Final Report] that merit consumer protection consideration by the [Commission] is not exhaustive and the [Commission] should consider robust customer protections for all MEDSIS pilots.”¹⁵⁴ The CIWG also recommends that the Commission notify customers about their rights with respect to the implementation of MEDSIS Pilot Projects through townhalls, notices on the Commission’s website, and other effective outreach measures.¹⁵⁵

85. The Commission finds this recommendation to be appropriate given the importance of consumer protections, especially where, as with the case of pilot projects, experimental business structures and new technologies may be deployed. It is important for the Commission and stakeholders to be forward-thinking as to how these new models may impact everyday customers in both positive and negative ways. Therefore, the Commission directs Commission Staff to reconvene the CBOR Working Group within 60 days from the date of this Order to discuss and propose: (1) revisions to the Commission’s CBOR rules to align them with the MEDSIS Vision; (2) interim CBOR rules that will be applicable to the MEDSIS Pilot Programs; and (3) appropriate

¹⁴⁹ Final WG Report at 158.

¹⁵⁰ Final WG Report at 158.

¹⁵¹ Final WG Report at 158.

¹⁵² Final WG Report at 160.

¹⁵³ Final WG Report at 160.

¹⁵⁴ Final WG Report at 160.

¹⁵⁵ Final WG Report at 158.

outreach methods to effectively inform customers of the CBOR rule changes. The Working Group shall also: (1) submit its initial recommendations to the Pilot Projects Governance Board for review and input within 120 days of its first meeting; and (2) submit its final recommendations to the Commission, including a proposed NOPR, within 180 days of its first meeting.

7) CIWG L-5.4.7: Opportunity for Resilience Hubs in the District

86. The CIWG strongly suggests that the Commission should explore the opportunity for resilience hubs in the District based on a DOEE community engagement initiative in Ward 7.¹⁵⁶ “Resilience Hubs,” as defined by DOEE are “government designated community-serving facilities augmented to support residents and coordinate resource distribution and services before, during, or after a disruption.”¹⁵⁷ The key components of a hub include, for example, providing shelter and electricity during extreme events and maintaining a supply of needed resources including water, food, ice, and basic medical supplies.¹⁵⁸

87. It is significant that DOEE objected to the inclusion of this Learning in the Final WG Report stating that, while the discussions around “Resilience Hubs” were useful, “there is nothing here that is actionable.”¹⁵⁹ DOEE further emphasized that “Resilience Hubs” are “District Government-designated entities with specific criteria and functionalities that address more than energy issues. DOEE would like to discourage others, respectfully, from using this term simply because a project includes energy storage and onsite generation.”¹⁶⁰

88. Thus, while this CIWG Learning (the opportunity for resiliency hubs to be deployed throughout the District) received wide support from the WG, we are persuaded by DOEE’s objection, caveat and indication that it was moving forward with the Hubs as its own initiative, to exercise care in how we treat this matter. The Commission acknowledges that “Resiliency Hubs” are a promising idea that could be used to enhance the quality of life in low-income areas throughout the city, especially in times of crisis, as well as provide job training opportunities for District residents. However, because DOEE is already pursuing this as an initiative, the Commission declines to pursue this Learning at this time and, instead, offers any assistance we can provide to DOEE in this endeavor.

¹⁵⁶ Final WG Report at 161-164. This engagement was facilitated through the development of an Equity Advisory Group (EAG) consisting of a cross-section of community members, an independent evaluator, a neutral facilitator, and support from DOEE and the Georgetown Climate Center. Using the EAG approach, the community was able to lead and be actively involved in developing community plans rather than passively participating while others presented them with information. This approach allowed the development of community plans with more stakeholder acceptance and buy-in. Through this engagement approach, the community members in Ward 7 recommended the establishment of a resilience hub in the Ward.

¹⁵⁷ Final WG Report at 163.

¹⁵⁸ Final WG Report at 163.

¹⁵⁹ Final WG Report at 162.

¹⁶⁰ Final WG Report at 164-165.

8) CIWG R-5.4.8: Commission to Ensure Connection Between Customers' Energy Usage and their Environment Impact

89. The CIWG recommends that the Commission ensure a direct connection between customers' energy usage and their environmental impact through the deployment of home energy reports that display customers' carbon impact information. This would aid customer decision-making around participating in Pepco or third-party programs/offers and encourage customer investment in non-carbon DER opportunities.¹⁶¹

90. Generally, the stakeholders support this recommendation. Grid 2.0, DCCUB, Sierra Club, and DCCA note that "Washington Gas should also provide comparable data to its customers on their gas use."¹⁶² DCSEU concludes that this recommendation "should be closely coordinated with other activities occurring in the district such as the Clean and Affordable Energy Act Benchmarking Requirement and the Clean Energy DC Act Building Energy Performance Standard."¹⁶³ Pepco supports "the use of a Maryland-type home energy report program and the notion of developing tools for customers to estimate their total lifestyle carbon footprint, which may go beyond the scope of home electricity usage."¹⁶⁴ WGL Energy notes that it "does not support and opposes this recommendation to the extent it asserts that third party energy suppliers must offer customers energy reports. While many suppliers and third-party providers may choose to offer such programs the Commission only has authority to require that the utilities offer certain products as rate regulated entities."¹⁶⁵

91. The CIWG recommends the deployment of Home Energy Reports that display customer's usage and carbon footprint information. The Commission acknowledges that Maryland approved Pepco's request to deploy Home Energy Reports paid for from EE funds and the MD Empowerment Initiative and that Pepco previously proposed implementing the same program in the District as a part of *Formal Case No. 1148*.¹⁶⁶ While Pepco indicates that the cost of providing the home energy report is nominal, the Commission is also interested in the public utility's ability to gather additional information regarding the methodology that would be used to calculate a customer's carbon footprint considering the fuel mix report from Pepco and third-party energy suppliers. Therefore, the Commission directs Pepco and WGL to submit proposals regarding the feasibility of including the carbon footprint metric on customers' usage reports,

¹⁶¹ Final WG Report at 165.

¹⁶² Final WG Report at 166.

¹⁶³ Final WG Report at 166.

¹⁶⁴ Final WG Report at 167.

¹⁶⁵ Final WG Report at 167.

¹⁶⁶ *Formal Case No 1148, In the Matter of the Investigation into the Establishment and Implementation of Energy Efficiency and Energy Conservation Programs Targeted towards both Affordable Multifamily Units and Master Metered Multifamily Buildings which include Low and Limited Income Residents in the District of Columbia*, Potomac Electric Power Company's Initial Comments in Response to Order No. 19145, filed January 19, 2018.

including an explanation of the methodology they would use to do so. The Commission acknowledges that Washington Gas Energy opposes the applicability of these reports on third-party suppliers, therefore approval would initially only apply to Pepco and WGL. The Commission directs Pepco and WGL, respectively, to submit a feasibility report within 30 days of the date of the Order. The Commission's decision on implementation of joint Home Energy Report and/or Carbon Footprint Report shall be issued within 30 days of receipt of the utilities' filings.

MICROGRIDS¹⁶⁷

E. Working Group 5 – Microgrids

92. The Microgrids Working Group (“MWG”) was initially tasked by the Commission in Order No. 19432 to: (1) address microgrid development in the District, including newly constructed microgrids and retrofitted microgrids; (2) examine the benefits and costs of microgrids; and (3) produce recommendations to address microgrid ownership, operation, standards, and implementation.¹⁶⁸ To that end, the MWG did address microgrid development in the District, examined the benefits and costs of microgrids, including factors such as safety, reliability and resiliency, and produced recommendations related to microgrid ownership, operation, standards and implementation. The working group also investigated whether current regulations are adequate and appropriate to regulate the construction, operation, and maintenance of new and existing microgrid facilities.¹⁶⁹ The key questions that were to be addressed by the MWG and the desired outcomes are specifically listed on pages 32-33 of the Final Report.¹⁷⁰

93. The Final Report acknowledges that microgrids fall into different categories and structures. The focus areas of the MWG were to discuss ownership and operation structures, business models and value propositions, and the different microgrid variances which lead to appropriate microgrid classifications and regulatory treatments.¹⁷¹

94. Because of the vast differences in types of microgrids, as well as the current statutory framework of the Commission, microgrid regulation presents the most controversial and

¹⁶⁷ Microgrid is defined in the Commission's interconnection rules (15 DCMR § 4099.1) as follows: “a collection of interconnected loads, generation assets, and advanced control equipment, installed across a limited geographic area and within a defined electrical boundary that is capable of disconnecting from the larger Electric Distribution System. A Microgrid may serve a single customer with several structures or serve multiple customers. A Microgrid can connect and disconnect from the distribution system to enable it to operate in both interconnected or island mode.”

¹⁶⁸ *Formal Case No. 1130*, Order No. 19432, ¶ 6, rel. August 9, 2018.

¹⁶⁹ Final WG Report at 17, 32.

¹⁷⁰ As stated previously, Chapter 4 of the Final Report (pages 17-52) provides a complete summary of the working group process for each working group, including the charters, stakeholders, topics and documents that influenced the working group process. Chapter 5 (pages 53-238) is the output of that process for each group.

¹⁷¹ Final WG Report at 169.

challenging subject for this Commission. Commission Staff laid out a host of questions related to microgrid regulation in the MEDSIS Staff Report and the major goals of the MWG was to discuss these questions and aid in the Commission's decision-making.

95. We note at the outset that “the Public Service Commission is an administrative body possessing only such powers as are granted by statute, and it may make only such orders as the public utilities act authorizes.”¹⁷² The Commission has been granted general supervision over all gas and electric companies in the District of Columbia pursuant to D.C. Code § 34-301. It also has express jurisdiction to regulate “public utilities” in many specific instances.¹⁷³ D.C. Code § 34-214 defines a “public utility,” in pertinent part, to “mean and embrace every . . . gas plant, gas company, electric company, telephone corporation, . . . and pipeline company.” D.C. Code § 34-207 defines “electric company,” in pertinent part, to include “every corporation, company, association . . . physically transmitting or distributing electricity in the District of Columbia to retail customers.” D.C. Code § 34-1501(12) defines “customer” as “a purchaser of electricity for end use in the District of Columbia.”¹⁷⁴ As for the relevant exemption from the term “electric company,” D.C. Code § 34-207 also provides in pertinent part:

The term excludes any building owner, lessee, or manager who, respectively, owns leases or manages, the internal distribution system serving the building and who supplies electricity and other related electricity services solely to occupants of the building for use by the occupants.¹⁷⁵

96. Thus, under our statutory mandate, the Commission has the authority to regulate microgrids if we determine that they are acting within the definition of a “public utility.” However, with respect to the regulation of microgrids, the Commission has a pending case before us to decide this issue of first impression. Consequently, until the Commission rules on this particular matter, we cannot opine on how we would regulate microgrids. Moreover, the MEDSIS proceeding whose primary purpose is to establish the framework for the grid of the future is not the proper forum to make a legal determination of the Commission's jurisdiction over microgrids. We thank the MWG for their hard work and discussion of issues related to microgrids. The Commission believes that until the legal questions in the pending case are resolved, a discussion of any microgrid-related issues is premature. Therefore, at the conclusion of the pending case, the Commission will initiate

¹⁷² *Washington Gas Light Co. v. Pub. Serv. Comm'n of D.C.*, 982 A.2d 691, 718 (D.C. 2009). *See also, Chesapeake & Potomac Tel. Co. v. Pub. Serv. Comm'n*, 378 A.2d 1085, 1089 (D.C. 1977) (“The Commission is a creature of statute and has only those powers given to it by statute.”).

¹⁷³ *See, e.g.*, D.C. Code § 34-401 (2001) (investigation of accidents); § 34-402 (2001) (enforcement of all laws relating to public utilities); § 34-502 (2001) (issuance of securities); and § 34-901 (regulation of public utility rates).

¹⁷⁴ The term excludes an occupant of a building where the owner, lessee, or manager manages the internal distribution system serving the building and supplies electricity solely to occupants of the building for use by the occupants. D.C. Code § 34-1501(12) (Supp. 2018). D.C. Code § 34-1671.02 (7) (2001) defines a natural gas “customer” as “a purchaser of natural gas in whose name a service account exists with the company.”

¹⁷⁵ D.C. Code § 34-207 (Supp. 2013).

a proceeding to address the microgrid recommendations in the Final WG Report and our overall regulatory authority in this matter.

PILOT PROJECTS

F. Working Group 6 – Pilot Projects

97. As a condition of the PHI-Exelon Merger, a MEDSIS Pilot Project Fund of \$21.55 million was created to fund grid modernization projects to benefit District ratepayers. The Pilot Projects Working Group (“PPWG”) was formed to finalize the proposed funding parameters laid out in Section VII of the MEDSIS Staff Report, including Pilot Project governance and management structure and project selection criteria so that the Commission could immediately begin the process of selecting appropriate projects using an open, transparent, and fair process. The Commission made it clear in Order No. 19432, that the PPWG was not formed to “focus on producing actual pilot project concepts.”¹⁷⁶ The PPWG provided four recommendations found on pages 223-237 of the Final WG Report.

1) PPWG R-5.6.1: Commission to Implement Pilot Exclusion Criteria to Pilot Project Selection Process

98. The PPWG recommends that the Commission implement three (3) “exclusion” criteria for the Pilot Projects: (1) that energy efficiency programs not be excluded from consideration for Pilot Project funding; (2) that (a) unproven technologies should be excluded from consideration for Pilot Project funding, including technologies that score a seven (7) or below in the technology readiness screening (*Figure 5*), and (b) all projects scoring a nine (9) or below in the technology readiness screening should submit risk mitigation plans; and (3) the unregulated affiliates of Exelon and AltaGas should not be allowed to lead Pilot Projects but should not be prevented from participating in projects.¹⁷⁷

99. With regard to EE programs being permitted to apply for Pilot Project Funds, the Commission recognizes that in Order No. 18148, approving the PHI-Exelon merger, the Commission also created an \$11.25 million fund to implement EE programs for low- and limited-income MMA buildings with the requirement that the approved programs not duplicate the programs offered by the DCSEU. Since that Order, the Commission opened *Formal Case No. 1148* to consider appropriate energy efficiency programs, and by Order No. 19428 approved the use of the funds towards the implementation of the Whole Building Deep Energy Retrofit Program proposed by NCLC and OPC.¹⁷⁸ The Commission also recognizes that in the Clean Energy DC Act passed by D.C. Council this year, the D.C. Council explicitly permitted Pepco and WGL to submit for the Commission’s approval EE and demand reduction programs that “are not

¹⁷⁶ *Formal Case No. 1130*, Order No. 19432, ¶ 6.

¹⁷⁷ Final WG Report at 223.

¹⁷⁸ *Formal Case No. 1148*, Order No. 19428, rel. August 9, 2018.

substantially similar to programs offered or in development by the SEU, unless the SEU supports such programs.”¹⁷⁹

100. Based on the above, specifically: (1) that the Commission has approved the use of the \$11.25 million funds towards a particular EE program; and (2) clear legislative direction permitting Pepco and WGL to develop EE programs, the Commission finds it appropriate to approve exclusion criteria 1 and 3. The Commission recognizes DCCA’s position that only pilots with EE components should be considered for Pilot Project funding. However, because the types of EE programs that will be submitted by Pepco or WGL must comply with the Clean Energy DC Act’s requirement that they are not duplicative of DCSEU efforts, and because of the selection criteria discussed below, which are based off of the MEDSIS Vision and Guiding Principles, we believe they are sufficiently robust to ensure that the most viable programs are ultimately selected for funding.

101. The Commission also finds it appropriate to approve the PPWG’s recommendation that unproven technologies be excluded from funding consideration and the use of the U.S. Department of Energy (“DOE”) technology readiness model is an appropriate screening measure to rank proposed technologies. However, we also find that the chart provided at Figure 5.15 in the Final WG Report (*Figure 5*) provides insufficient detail for the Pilot Projects Governance Board¹⁸⁰ or ranking official to actually rank the pilots against the DOE Technology Readiness Level (“TRL”) model. Therefore, we direct the use, and appropriate modification, of the TRL Questionnaire developed by Pacific Northwest National Laboratory (“PNNL”) for DOE in PNNL’s 2012 “Development of Technology Readiness Level (TRL) Metrics and Risk Measures” report.¹⁸¹ The Questionnaire is provided at Appendix D to this Order. The Pilot Projects Governance Board is permitted to amend the questionnaire as it deems appropriate to facilitate the efficient selection of pilots.

¹⁷⁹ Clean Energy DC Act, Section 201(b).

¹⁸⁰ The Pilot Projects Governance Board is the entity partially formed by the Commission to help control the overall direction, implementation, and management of the MEDSIS Pilot Project process. The Board shall implement the process as directed in this Order and propose pilots to the Commission to receive MEDSIS funding and to be implemented in the District.

¹⁸¹ Pacific Northwest National Laboratory, “Development of Technology Readiness Level (TRL) Metrics and Risk Measures,” submitted to the U.S. Department of Energy in October 2012.

Figure 4: DOE Technology Readiness Level Matrix

| TRL | Description | Use in MEDSIS? | Modifications? |
|-------|--|----------------|--|
| TRL 9 | System ready for full scale deployment | | |
| TRL 8 | System incorporated in commercial design | TRL9 -Y | Available for MEDSIS funding |
| TRL 7 | Integrated pilot system demonstrated | TRL8 -Y | Risk must be addressed in the application. Examples, co-funding, project risk. |
| TRL 6 | Prototype system verified | TRL7-Y | Risk must be addressed in the application. Examples, co-funding, project risk |
| TRL 5 | Laboratory testing of integrated system | TRL6-N | Not available for MEDSIS funding |
| TRL 4 | Laboratory testing of prototype component or process | TRL5-N | Not available for MEDSIS funding |
| TRL 3 | Critical function: proof of concept established | TRL4-N | Not available for MEDSIS funding |
| TRL 2 | Technology concept and/or application formulated | TRL3-N | Not available for MEDSIS funding |
| TRL 1 | Basic principles observed and reported | TRL2-N | Not available for MEDSIS funding |
| | | TRL1-N | Not available for MEDSIS funding |

102. The Commission also finds that there is insufficient detail provided in the Final WG Report as to why or how the PPWG decided that pilots scoring a 7 or below should be considered “unproven” and why pilots scoring below a 9 (as opposed to below an 8, for example) require risk mitigation plans (*Table 1*). Therefore, while we agree that there should be a cut-off for unproven technologies and a requirement for the submission of risk mitigation plans for lower scoring technologies, the basis for approving the PPWG’s recommendation to establish those levels is unsubstantiated. Thus, the Commission directs the Pilot Projects Governance Board to consider the appropriate TRL cut-off and risk mitigation designation and to incorporate the agreed upon Technology Readiness Level in the Call for Papers¹⁸² and the risk mitigation requirement in the RFPs.

Table 2: Technology Readiness Levels Descriptions

| Technology Readiness Level | Description |
|--|--|
| TRL 1 – Basic Research: basic principles are observed and reported | <ul style="list-style-type: none"> • Lowest level of technology readiness • Scientific research begins to be translated into applied research and development • Examples might include fundamental investigations and paper studies |
| TRL 2 – Applied Research: technology concept and/or application formulated | <ul style="list-style-type: none"> • Once basic principles are observed, practical applications can be formulated • Examples are limited to analytic studies and experimentation |
| TRL 3 – Critical function, proof of concept established | <ul style="list-style-type: none"> • Active research and development is initiated • Laboratory studies aim to validate analytical predictions of separate components of the technology • Examples include components that are not yet integrated or representative |
| TRL 4 – Laboratory testing of prototype component or process | <ul style="list-style-type: none"> • Design, development and lab testing of technological components are performed • Basic technological components are integrated to establish that they will work together • This is a relatively “low fidelity” prototype in comparison with the eventual system |

¹⁸² It is the Commission’s understanding, though not defined in the Final WG Report, that the “Call for Papers” in the context of the MEDSIS Pilot Projects has a similar meaning as it does in academia where a professional organization or similar body would ask those within their industry to submit original articles for review and consideration by the institution. Here, the Pilot Projects Governance Board would release a broad call for papers, inclusive of those concepts and goals listed in Appendix C, and then use the procedures approved in this Order to rank the responses before issuing industry-wide RFPs.

| Technology Readiness Level | Description |
|--|--|
| TRL 5 – Laboratory testing of integrated system | <ul style="list-style-type: none"> • The basic technological components are integrated together with realistic supporting elements to be tested in a simulated environment • This is a “high fidelity” prototype compared to the eventual system |
| TRL 6 – Prototype system verified | <ul style="list-style-type: none"> • The prototype, which is well beyond that of level 5, is tested in a relevant environment • The system or process demonstration is carried out in an operational environment |
| TRL 7 – Integrated pilot system demonstrated | <ul style="list-style-type: none"> • Prototype is near, or at, planned operational system level • The final design is virtually complete • The goal of this stage is to remove engineering and manufacturing risk |
| TRL 8 – System incorporated in commercial design | <ul style="list-style-type: none"> • Technology has been proven to work in its final form under the expected conditions • In most of the cases, this level represents the end of true system development |
| TRL 9 – System ready for full scale deployment | <ul style="list-style-type: none"> • The technology is in its final form • Ready for commercial deployment |
| TRL beyond 9 – Market introduction | <ul style="list-style-type: none"> • The product, process or service is launched commercially, marketed to and adopted by a group of customers |

Source: WG6 Meeting 4 - PP Presentation

2) PPWG R-5.6.2: Commission should Implement a Pilot Project Selection Process with Two Step Screening

103. The PPWG recommends that the Commission initiate the MEDSIS Pilot Projects Phase in this Order. The PPWG also recommends that the Commission implement its proposed Pilot Project selection process, which includes a two-step screening process, pictured in Figures 5.16 and 5.17 on page 228 of the Final WG Report, that consists of a general Call for Papers followed by an RFP targeted to specific respondents.¹⁸³ Approval of this two-step screening process would include adoption of the Pilot Project Screening and Scoring Template provided at Appendix A.8 of the Final WG Report which includes a Level 1 and Level 2 scoring template

¹⁸³

Final WG Report at 226.

based off the proposed criteria provided in Section VII of the MEDSIS Staff Report.¹⁸⁴ The Commission finds the overall approach provided by the PPWG to be reasonable. However, there are three points of concern included in the PPWG's proposal: (1) the recommendation that the Commission provide an approved list of concepts in the Call for Papers; (2) the recommendation that the RFP process be targeted only to specific respondents to the Call for Papers; and (3) the recommended timelines for implementation of the Pilot Projects.

104. First, the Commission does not believe the Call for Papers should be limited to a pre-determined list of concepts. Instead, we modify the process so that Step 1 includes a broad Call for Papers from industry solution providers targeted at general goals as outlined by the MEDSIS Vision and Guiding Principles and described in the District's Clean Energy DC Act. At Appendix C, the Commission provides a non-exhaustive list of concepts, many of which were pulled from stakeholder recommendations in the Final WG Report, that are suitable for the Call for Papers as well as general goals that solution providers should try to address in their responses.

105. Next, the PPWG recommends that the Pilot Projects Governance Board only issue RFPs to specific respondents to the Call for Papers who pass Level 1 screening. However, we believe that the RFP process should be open to any solution provider who can implement the project, not only those who respond to the Call for Papers, even though we acknowledge that those who respond to the Call for Papers will have greater familiarity with the parameters of the proposed project. Therefore, we modify this step of the selection process so that the Pilot Projects Governance Board reviews responses to the Call for Papers, selects responses that are in-line with MEDSIS goals and District policies, and then issues an industry-wide RFP. To ensure that the Commission aligns to District policies, the RFP will comply with the District's contracting requirement of meeting the 35% certified business enterprise ("CBE") requirement. Responses to the RFP should be reviewed and ranked in accordance with the Level 2 Screening and Scoring Template provided at Appendix A.8. We also believe that it is important to give the Pilot Projects Governance Board some level of flexibility to amend the screening parameters, if necessary, to facilitate the process. Therefore, the Board is permitted to modify the screening parameters if necessary and supported by a majority vote.

106. Finally, the Commission appreciates the need to move with all deliberate speed to implement the Pilot Projects so that District residents can begin reaping the benefits of this process. We also agree that, to the extent possible and practicable, the Pilot Projects Governance Board should adopt an implementation timeline that will have projects selected by the end of Q4 2020. However, we find that the explicit timelines for implementation proposed by the PPWG may be too aggressive. For example, the PPWG recommends that the pilot projects be selected by the end of Q2 2020; adhering to this timeline will require, at a minimum, that the: (1) Pilot Projects Governance Board be formed; (2) the non-standing members be selected; (3) consultant or contract administrator be selected, which requires an RFP process to be completed by Commission Staff;¹⁸⁵

¹⁸⁴ Final WG Report at 226.

¹⁸⁵ The Commission notes that the expense of the consultant hired by Staff as well as the Pilot Project Administrator will be covered by MEDSIS Funds. (See *Formal Case No. 1130*, Order No. 19143, rel. October 19, 2017).

(4) Call for Papers be developed and issued; (5) responses submitted and ranked; (6) RFPs developed and issued; (7) responses submitted and ranked; (8) recommendation for project selection be filed by the Board with the Commission; and (9) Commission issue its order all by the end of June 2020. The Commission and the Pilot Projects Governance Board would have to complete each task within about 30 days in order to meet the PPWG's recommended timeframe for selecting the Pilot Projects. While accomplishing all of these tasks may be possible in 10 months, we find it is not probable, and we want to temper stakeholder expectations by implementing realistic timeframes. Therefore, while we commit to moving this process forward without undue delay and to using the timelines developed by the PPWG in Figure 5.16 in the Final WG Report as a framework, we decline to adopt the implementation timelines and, instead, direct the Pilot Projects Governance Board to develop and implement appropriate timeframes for reaching each key milestone.

3) PPWG R-5.6.3: Commission to Adopt Grant Funding Qualification Parameters for Pilot Projects

107. The PPWG recommends that the grant funding parameters recommended in the MEDSIS Staff Report be incorporated into the Pilot Project selection process. The PPWG integrated those parameters into the screening and scoring templates provided at Appendix A.8 to the Final WG Report with the following modifications: (1) that the environmental impacts analysis address both costs and benefits; (2) that instead of a ceiling or cap being placed on the amount of funding a project can receive the Commission direct that the funds should cover 6-10 projects; and (3) applicants be required to address the scalability and replicability of their projects so that successful projects will result in the most benefit to the District.¹⁸⁶ The Commission finds these amendments to the grant funding parameters developed in the MEDSIS Staff report to be reasonable and appropriate. We also find that the Scoring Sheet at Appendix A adequately covers the key considerations to proper implementation of the Pilot Projects. However, we agree with DCCA that consideration for monitoring, reporting, and project evaluation should be factored into the project design and that respondents should build it in as a specific budget item. We also agree with Grid Alternatives' recommendation to focus on equity and inclusion including CBE and non-profit participation as part of the grant funding qualification parameters. Therefore, as we have given the Board authority to modify the screening and scoring criteria with a majority vote, we direct the Pilot Projects Governance Board to incorporate project monitoring, reporting, evaluation, and equity and inclusion parameters into the screening and scoring template provided at Appendix A.8.

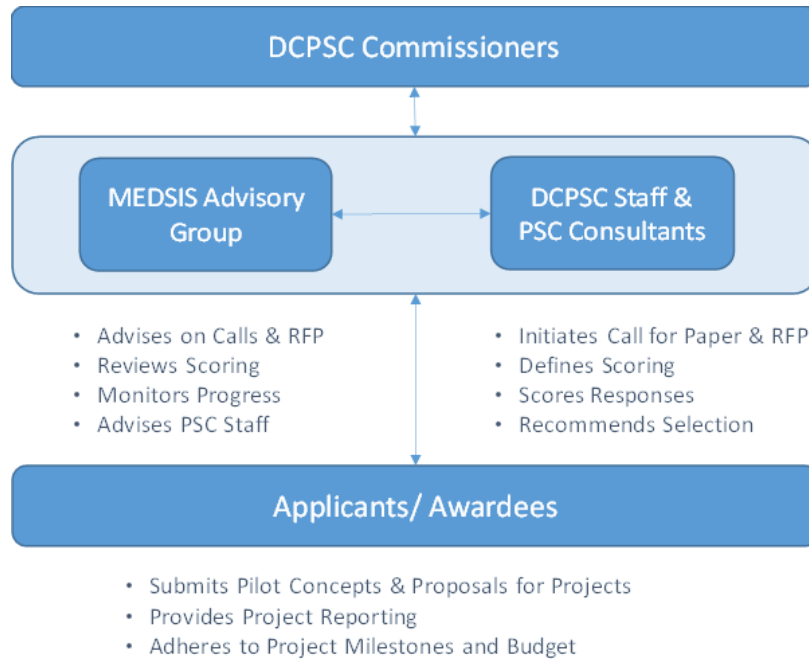
4) PPWG R-5.6.4: Commission to Implement a Pilot Projects Governance Model

108. The PPWG recommends that the Commission adopt the Pilot Projects Governance Model described on page 234, and depicted in Figure 5.19 on page 236, of the Final WG Report (*Figure 6*). The PPWG also recommends that the governance structure be set up in time to support

¹⁸⁶ Final WG Report at 231.

the Pilot Projects Phase and provide advisory functions throughout the Pilot Project selection, monitoring, reporting, and evaluation steps.¹⁸⁷

Figure 5: Pilot Projects Governance Board Structure



109. The Commission finds that the proposed Governance Model is in-line with the proposal provided in the MEDSIS Staff Report and overall reasonable and appropriate. Therefore, we adopt the proposed structure with the following modifications. First, the Pilot Projects Governance Board shall at a minimum include Commission Staff, OPC, DOEE, Pepco, WGL, and DCCUB as standing members. We recognize that utility participation in this process is integral to its success; however, as pointed out by DCCA, because affiliates of Exelon and AltaGas are permitted to apply for pilot project funding, there is a potential conflict of interest that must be mitigated. Therefore, Pepco and WGL shall be non-voting (*ex officio*) members of the Pilot Projects Governance Board, not consultants. All other Governance Board members shall be organizational representatives, selected by the standing board members, identified above, taking into account General MicroGrid’s recommendation that members should be selected based primarily on their “expertise, knowledge, and experience qualifications . . . not just on the stakeholder interest that they would represent.”¹⁸⁸ The Commission therefore directs Commission Staff to convene the first meeting of the Pilot Projects Governance Board within 30 days of the date of this Order.

110. The Pilot Projects Board’s first order of business shall be to develop and issue an application to solicit submissions from stakeholders interested in a voluntary Governance Board

¹⁸⁷ Final WG Report at 234.

¹⁸⁸ Final WG Report at 237.

position. The application should include selection criteria that factor-in the applicant's expertise and related qualifications as well as their stated substantial interest in the process. The voluntary Pilot Projects Governance Board member selection should also, to the extent possible, be balanced between government entities, utilities, solution providers, and community organizations, with at least one member being a community representative, like an ANC commissioner, as the Commission values the participation and perspective from the various entities. As recommended by DCCA, the Governance Board should include a conflict of interest statement in the Roles and Requirements for Board members, including language that a person cannot serve on the Board if their organization plans to submit a proposal as part of the Pilot Projects process.¹⁸⁹ After member selection is finalized, the Commission directs the Governance Board to develop and submit to the Commission, within 30 days of the first full Pilot Projects Governance Board meeting, an appropriate timeline to expeditiously move through the Pilot Project Selection process as approved in this Order.

IV. NEXT STEPS – POWERPATH DC

111. As a Commission, we remain committed to serving our regulatory mandate, furthering the MEDSIS Vision, and helping the District reach its clean energy and environmental conservation goals at every turn. This Commission remains dedicated to identifying technologies and policies that can be implemented in the District to modernize the distribution energy delivery system; and in the near-term, to make the distribution energy delivery system more reliable, efficient, cost effective, and interactive. Finally, we value the input of stakeholders, and as we embark upon the next Phases of the PowerPath DC initiative, we will continue to seek their input in a similar, open, transparent, and collaborative manner.

THEREFORE, IT IS ORDERED THAT:

DIAA

112. The Commission **DIRECTS** that proponents of any proposal for Commission approval to explain how the proposal comports with and advances the MEDSIS Vision, including the proposals' effects on global climate change and the District's public climate commitments, in accordance with ¶ 16 of this Order;

113. The Commission **DIRECTS** Commission Staff, as mentioned in Recommendation 5.2.7, to lead educational workshops in *Formal Case No. 1050* to inform stakeholders and solicit their input on IEEE updates and any other applicable industry advancements, in accordance with ¶ 19 of this Order;

114. The Commission **APPROVES AND ADOPTS** the proposed changes to the MEDSIS Vision Statement, with slight modifications, as reflected in Appendix C to this Order, in accordance with ¶ 22 of this Order;

¹⁸⁹ Final WG Report at 237.

115. The Commission **DIRECTS** the Potomac Electric Power Company and Washington Gas Light Company, respectively, to review DIAAWG Recommendation 5.1.6 and thereafter update its website to facilitate data availability, consistent with this Recommendation;

- (a) Pepco shall file a report with the Commission within 60 days from the date of this Order detailing what data has been added to its website as of that date, what data will be added thereafter, and in what timeframe(s) the data will be added; this report shall include a justification for any deviations from DIAAWG Recommendation 5.1.6, in accordance with ¶ 25 of this Order;
- (b) WGL shall file a statement within 60 days from the date of this Order indicating that it has updated its website to provide the portal described in DIAAWG recommendation 5.1.6 or providing an explanation of either why the update has not yet occurred or why WGL believes this portal is unnecessary or infeasible, in accordance with ¶ 26 above; and
- (c) Pepco and, if applicable, WGL shall include a link(s) to these portals in their respective 60-day filings so that the Commission can add this information to its website.

116. The Commission **DIRECTS** the Potomac Electric Power Company to commence monthly updates of its web-hosted capacity maps within 90 days from the date of this Order, in accordance with ¶ 28 of this Order;

117. In accordance with ¶ 31 of this Order, the Commission **DIRECTS** the Potomac Electric Power Company and Washington Gas Light Company, respectively, to create a secure web portal and non-disclosure agreement process to enable system-level data flow between third parties and each utility for RFP responses and programmatic data requests by government agencies, pertaining to the MEDSIS Pilot Project process. In accordance with ¶ 31 of this Order, requesters seeking system-level data information in a customized format shall bear the costs associated with providing this information and the utilities are further directed to:

- (a) Report within 120 days from the date of this Order on the status of implementing the secure web portal;
- (b) Develop and implement the secure web portal in conjunction with the stakeholders' recommended informed DSP and NWA Consideration Process as approved in Recommendation 5.2.3;
- (c) Include in its Annual Consolidated Report and or file annually a report on the secured portal, including, but not limited to: details on: (i) how many requests for data were received; (ii) how many of those requests were granted, denied, or withdrawn; (iii) the average response time to provide the requested data; (iv) a list identifying the organizations that requested data, (v) the costs incurred for the provision of data, including costs paid by the requestor for customized data; and

NWA

118. The Commission **DIRECTS** Commission Staff to initiate and conclude, within 180 days from the date of this Order, a rulemaking proceeding on the Proposed Notice of Proposed Rulemaking included at Appendix E for “Advanced Inverter” and “Non-Wires Alternative” in accordance with ¶¶ 40 and 51 of this Order;

119. In accordance with the discussion in Section III.B.3 of this Order - NWA R-5.2.3 - above, the Commission **DIRECTS**:

- (a) The Potomac Electric Power Company to move forward immediately with the February 19th stakeholder working group process (shown in Figure 5.1 on page 90 of the Final Report) of the stakeholder-informed distribution system planning (“DSP”) and NWA consideration process (see Final Report at Appendix A.6.2), as modified by the Commission in ¶¶ 46-47 of this Order, with the understanding that the process will be iterative and evolving;
- (b) For the first project under the new DSP process, the Potomac Electric Power Company shall submit, for the Commission’s review and approval, the Locational Constraints Report and the parameters for the Non-Wire Alternative solutions included in such Report, in accordance with ¶ 47, of this Order;
- (c) The Potomac Electric Power Company shall file the revised DSP with the Commission within 90 days from the date of this Order, in accordance with ¶ 48 of this Order; and
- (d) Within 60 days from the date of this Order, the Potomac Electric Power Company shall submit a filing that provides: (1) a list of all projects currently under review of that have been budgeted for in their 5 year planning process; and (2) an accelerated DSP implementation plan that covers projects starting from 2023, or 3+ years, in accordance with ¶ 49 of this Order;

120. The Commission **DIRECTS** Commission Staff to initiate a Notice of Inquiry within 90 days from the date of this Order to address ownership of energy storage devices and other DERs by setting out the recommendations from the Final WG Report, with appropriate modifications, and asking for public comment, in accordance with ¶ 54 of this Order;

121. The Commission **DIRECTS** Commission Staff to include an NWA pilot in the Non-Exhaustive list of Pilot Project concepts in the Call for Papers, in accordance with ¶¶ 55 and 104 of this Order;

122. The Commission **DIRECTS** the use of educational workshops to inform stakeholders and solicit their input on IEEE updates and any other applicable industry advancements in lieu of establishing a stakeholder working group to plan deployment of advanced inverters and implementation of IEEE 1547-2018 Standards, in accordance with ¶ 59 of this Order.

123. The Commission **DIRECTS** Commission Staff, in conjunction with the Potomac Electric Power Company, to evaluate the current status of implementing these standards and to arrange for the first educational workshop to be scheduled and held within 120 days from the date of this Order, also in accordance with ¶ 59 of this Order;

RATE DESIGN

124. The Commission **DIRECTS** the Potomac Electric Power Company to file with the Commission a strawman residential dynamic pricing proposal, along with an explanation of all identified benefits and costs, as well as any PJM market revenue concerns, within 60 days from the date of this Order; interested persons should file comments within 30 days of the Potomac Electric Power Company's filing; in accordance with ¶ 63 of this Order.

125. The Commission **DIRECTS** Commission Staff to issue a Public Notice convening the Dynamic Pricing Working Group within 30 days from the date of the Potomac Electric Power Company's strawman residential dynamic pricing plan proposal filing, in accordance with ¶ 63 of this Order;

126. The Commission **DEFERS** its decision on the recommendation that MEDSIS funds be used to conduct a Value of DER and Value of the Grid Study to the Pilot Project Phase, where limited MEDSIS Funds can be competitively allocated. The proponents of these studies, if they wish, may submit a proposal during the Pilot Project process, in accordance with ¶ 65 of this Order;

127. The Commission **MOVES** consideration of the performance-based ratemaking Learning 5.3.1 to *Formal Case No. 1156*, in accordance with ¶ 66 of this Order;

CUSTOMER IMPACT

128. The Commission **DIRECTS** the Office of Consumer Services, after consulting the Utility Discount Program Education Working Group, to submit an Action Plan to the Commission within 30 days from the date of this Order indicating what changes need to be made to the Commission's website to implement Recommendation 5.4.1, including whether an outside service provider is needed; approved changes to the Commission's website pursuant to the submitted Action Plan shall be completed within 120 days from the date of this Order, in accordance with ¶ 69 of this Order;

129. Commission **DIRECTS** Commission Staff to issue a Notice of Inquiry to gauge interest in revising the Commission's 1928 ban on residential submetering and assess under what conditions residential submetering might be appropriate, within 30 days from the date of this Order, in accordance with ¶ 79 of this Order;

130. In accordance with ¶ 73 of this Order, the Commission **DIRECTS** its Office of Consumer Services, in conjunction with its Office of Technical and Regulatory Analysis, to:

- (a) Develop an interactive micro-website linked to the Commission's website to host up-to-date competitive energy supplier offers as well as energy education material to aid customers in evaluating competitive energy supplier offers; and
- (b) Develop a marketing campaign to increase customer awareness of the new site.

The results of these directives shall be submitted to the Commission for review and approval within 180 days from the date of this Order.

131. Commission **DIRECTS** the Potomac Electric Power Company to report on the implementation of Green Button Connect My Data and related customer data matters, including Pepco's data aggregation sharing practices and data anonymization feasibility, as outlined in Appendix F to this Order, within 180 days from the date of this Order, in accordance with ¶ 76 of this Order;

132. The Commission **APPROVES** the request to enhance visibility of low-income programs and the creation of a consolidated offerings list on the Commission's website and directs the Commission's Office of Consumer Services to implement this recommendation within 180 days from the date of this Order, in accordance with ¶ 82 above;

133. The Commission **DIRECTS** the Office of Consumer Services consider the goals outlined by the CIWG and submit an Action Plan, including additional actionable recommendations, on how to enhance customer participation in low-income programs in the District within 90 days from the date of this Order, in accordance with ¶ 83 of this Order;

134. In accordance with ¶ 85 of this Order, the Commission **DIRECTS** Commission Staff to reconvene the Consumer Bill of Rights Working Group within 60 days from the date of this Order to consider:

- (a) Revisions to the Commission's CBOR rules to align them with the MEDSIS Vision;
- (b) Interim CBOR rules that will be applicable to the MEDSIS Pilot Programs; and
- (c) Appropriate outreach methods to effectively inform customers of the CBOR rule changes;

135. In accordance with ¶ 85 of this Order, the Commission **DIRECTS** the Consumer Bill of Rights Working Group to:

- (a) Submit its initial recommendations to the Pilot Projects Governance Board for review and input within 120 days from the date of its first meeting; and

- (b) Submit its final recommendations to the Commission, including a proposed Notice of Proposed Rulemaking, within 180 days from the date of its first meeting;

136. The Commission **DECLINES** to further explore the opportunity for Resilience Hubs in the District inasmuch as it is an ongoing initiative of the District's Department of Energy and Environment; however, the Commission **OFFERS** its assistance to DOEE in its endeavor in accordance with ¶ 88 of this Order;

137. The Commission **DIRECTS** the Potomac Electric Power Company and Washington Gas Light Company, respectively, to submit a report on the feasibility of including the carbon footprint metric on customers' home energy usage reports within 30 days from the date of this Order; the Commission's decision on the implementation of a joint Home Energy Report and/or Carbon Footprint Report shall be issued within 30 days thereafter, in accordance with ¶ 91 of this Order;

MICROGRIDS

138. The Commission believes that until the jurisdictional question in the pending case is resolved, a discussion of any microgrid-related issues is premature. Therefore, at the conclusion of the pending case, the Commission **WILL INITIATE** a proceeding to address the microgrid recommendations in the Final WG Report and our overall regulatory authority in this matter, in accordance with ¶ 96 of this Order;

PILOT PROJECTS

139. The Commission **INITIATES** Phase 4 of the MEDSIS Initiative: The Pilot Projects, in accordance with ¶ 103 of this Order;

140. The Commission **ADOPTS** the proposed Pilot Project "exclusion" criteria in accordance with the implementation directives described in ¶ 100 of this Order;

141. The Commission **DIRECTS** the Pilot Projects Governance Board to use, and modify where appropriate to facilitate the efficient selection of pilots, the Technology Readiness Level Questionnaire provided at Appendix D to this Order when determining whether proposed pilot project technologies are unproven and therefore unable to receive MEDSIS funds, in accordance with ¶ 101 of this Order;

142. The Commission **DIRECTS** the Pilot Projects Governance Board to consider the appropriate Technology Readiness Level cut-off and risk mitigation designation for pilot project proposals going through the two-step screening and scoring process approved in Recommendation 5.6.2 and to incorporate the agreed upon Technology Readiness Level in the Call for Papers and the risk mitigation requirement in the Request for Proposals, in accordance with ¶ 102 of this Order;

143. The Commission **ADOPTS** the two-step screening process proposed in Recommendation 5.6.2 and directs the Pilot Projects Governance Board to implement the process in accordance with the modifications described in ¶¶ 103-106 of this Order:

- (a) The Commission modifies Step 1 of the selection process to include a broad Call for Papers from industry solution providers targeted at general goals as outlined by the Commission and described in the Clean Energy DC Act in the non-exhaustive list of concepts provided at Appendix C to this Order;
- (b) The Commission modifies Step 2 of the pilot project selection process so that the Governance Board reviews responses to the Call for Papers, ranks and selects proposals that are in-line with MEDSIS goals and District policies, and then issues an industry-wide RFP; and
- (c) The Commission commits to moving Phase 4 forward without undue delay and to using the timelines proposed in Figure 5.16 of the Final Report as a framework, but declines to adopt the proposed implementation timelines and directs the Pilot Projects Governance Board to develop and implement appropriate timeframes for reaching each key milestone.

144. The Commission **ADOPTS** the proposed amendments to the Pilot Project grant funding parameters provided in Recommendation 5.6.3, including the use of the Scoring Sheet provided at Appendix A.8 of the Final Report, which shall be amended by the Board to incorporate project monitoring, reporting, and evaluation criteria into the screening and scoring template, in accordance with ¶ 107 of this Order;

145. The Commission **ADOPTS** the proposed Pilot Projects Governance Model (Figure 6) pursuant to the modifications described in ¶ 109 of this Order;

146. The Commission **DIRECTS** Commission Staff to convene the first meeting of the Pilot Projects Governance Board within 30 days from the date of this Order to develop and issue an application to solicit submissions from interested stakeholders in being a voluntary Pilot Projects Governance Board Member, in accordance with ¶ 109 of this Order; and

147. The Commission **DIRECTS** the Governance Board to develop and submit to the Commission, within 30 days of the first full board meeting, an appropriate timeline to expeditiously move through the Pilot Project Selection process as approved in this Order, in accordance with ¶ 110 of this Order.

A TRUE COPY:

BY DIRECTION OF THE COMMISSION:



CHIEF CLERK:

**BRINDA WESTBROOK-SEDGWICK
COMMISSION SECRETARY**

**APPENDIX A: CLEAN ENERGY DC OMNIBUS AMENDMENT ACT OF 2018
COMMISSION SPECIFIC DIRECTIVES**

The Clean Energy DC Omnibus Amendment Act of 2018 Commission specific directives:

- **Title I-Renewable Energy**
 - Renewable Energy Portfolio Standards (“RPS”)
 - Section 101(f) of the Act amends D.C. Code § 34-1439(b) to expand the reporting requirements that the Commission must include in the annual RPS Report submitted to Council on or before May 1. Compliance with this provision begins May 2019.
 - Section 2 of the Act amends § 34-1439(b) adding (b-1) which requires the Commission to publish quarterly on its website “the total amount of solar energy from solar energy systems meeting the requirements of section 4(e)(1) for which interconnection requests have been submitted in the previous 6 months.” Compliance with this provision begins July 2019.
 - Supervision and Regulation Considerations
 - Section 103 of the Act amends D.C. Code § 34-808.02 as follows: In supervising and regulating utility or energy companies, the Commission shall consider the public safety, the economy of the District, the conservation of natural resources, and the preservation of environmental quality, including effects on global climate change and the District’s public climate commitments.
- **Title II-Energy Efficiency**
 - Section 201(b) of the Act amends D.C. Code § 8-1773.01 *et seq.* (Clean and Affordable Energy Act (“CAEA”)) adding new subsections (g) and (h) requiring that the Commission, within 90 days, establish a working group with Pepco, WGL, DC SEU, and interested stakeholders to “recommend long-term and annual energy saving metrics, quantitative performance indicators, and cost-effective standards to be adopted by the Commission” for energy efficiency and demand response programs. The working group must submit its recommendations to the Commission within 90 days of its first meeting.
 - Subsections (4) and (5) permit Pepco and WGL to submit to the Commission energy efficiency and demand reduction programs that “are not substantially similar to programs offered or in development by the SEU, unless the SEU supports such programs” and requires that any such program applications shall meet long-term and annual energy savings metrics, primarily benefit low- and moderate-income residential residents, and meet the quantitative performance indicators, and cost-effective standards established by the Commission as a result of the required working group process.
 - Subsection (6) authorizes the Commission to approve applications for energy efficiency and demand reduction programs in accordance with established cost recovery principles like providing a rate of return on the investment and using annually adjusted surcharges, as long as the programs are in the public interest and consistent with the District’s clean energy and climate goals.

- Subsection (7) states that the provisions of the Act are not to be “construed to permit the electric company or gas company to own an energy generation asset, or otherwise alter the provisions prohibiting such ownership.”
- **Title II- Sustainable Energy Trust Fund**
 - Section 210 amends D.C. Code § 8-1774.10 of the CAEA to require updates to the electric and gas company’s tariffs through 2031.
- **Title V- Transportation Electrification Program**
 - Section 502 requires the Mayor to establish a transportation electrification program for busses and taxis within 180 days. Under subsection (e)(2), by February 1, 2022 and then every two years thereafter, every private vehicle-for-hire company must submit a confidential version of the greenhouse gas emissions reduction plan required by the Act to the Commission and the Council chairperson of the Commission’s oversight committee.

APPENDIX B: REVISED MEDSIS VISION STATEMENT**Revised MEDSIS Vision Statement and Guiding Principles****The MEDSIS Vision Statement**

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

GUIDING PRINCIPLES

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*¹⁹⁰ 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 District's energy delivery systems by: (1) encouraging and approving programs that fully

¹⁹⁰ 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. <https://doee.dc.gov/cleanenergydc>

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.

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 non-wires alternatives; comply with legislatively mandated deployment of DER in the District; permit rational participation of consumers and distribution service providers; and plan for, track, and monitor DER penetration rates on the grid.

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, and facilitates new product and service options for customers.
- 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 and natural gas industries increases the danger of "stranded assets" – capital investments that turn out to be unneeded. For this reason, before making investments in large capital projects, utilities must thoroughly examine the feasibility of non-wires alternatives as solutions to meet the stated investment objective at the lowest overall life-cycle cost. Utilities 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 for continued system reliability and affordability.
- 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 electric and natural gas distribution ratepayers. Therefore, benefits and costs of any proposals to use electric and natural gas distribution rates to compensate new DERs must be weighed carefully and considered in connection with the benefits and efficiencies such DER may bring to the distribution system.

- 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 Network¹⁹¹ capabilities of the smart meters.

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.

¹⁹¹ 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.

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.

APPENDIX C: NON-EXHAUSTIVE LIST OF PILOT PROJECT CONCEPTS AND GOALS

NON-EXHAUSTIVE LIST OF PILOT PROJECT CONCEPTS AND GOALS

FC 1130 Non-exhaustive list of concepts for Pilot Projects

- Value of Distributed Energy Resources
- Carbon Footprint of DER
- Multi-customer Microgrid
- Energy Storage
- Solar/battery installations
- Virtual Power Plant
- District Energy Systems
- Aggregated DERs
- Other

FC 1130 Non-exhaustive list of goals for Pilot Projects

- Reduce greenhouse gas emissions
- Enroll low-income customers
- Improve energy efficiency
- Demonstrate market viability
- Overcome barriers to adoption
- Expand DER integration
- Increase energy usage from clean energy resources
- Other

APPENDIX D: TECHNOLOGY READINESS LEVEL (TRL) SCORING QUESTIONNAIRE

TECHNOLOGY READINESS LEVEL (TRL) SCORING QUESTIONNAIRE

| Technology Readiness Level (TRL) | |
|----------------------------------|---|
| 9 | Commercial operation in relevant environment |
| 8 | Commercial demonstration, full scale deployment in final form |
| 7 | System prototype in an operational environment |
| 6 | Fully integrated pilot (prototype) tested in a relevant environment |
| 5 | Component validation in relevant environment (coal plant) |
| 4 | Component validation tests in laboratory environment |
| 3 | Analytical and experimental critical function proof-of- concept |
| 2 | Formulation of application |
| 1 | Basic principles |

+EPRI 2011 (Freeman and Bhowan) & GAO 2010

TRL 1: Have basic principles been observed and reported?

| Scale | | Comments |
|-------|--|----------|
| | Has a reasonable process concept been proposed? | |
| | Do basic principles (physical and chemical) support the concept? | |
| | Have scientific observations been reported? | |
| | Have mathematical formulations of concepts been developed? | |
| | Do rough calculations support the concept? | |

TRL 2: Has a concept or application been formulated?

| Scale | | Comments |
|-------|--|----------|
| | Have functional requirements been determined? | |
| | Have results of analytical studies been reported in peer-reviewed papers? | |
| | Have potential design solutions been identified? | |
| | Have the basic components of the technology been identified and partially characterized? | |
| | Have performance predictions been documented for each component? | |
| | Have paper studies (studies done without laboratory work) confirmed the feasibility of simple process simulations? | |
| | Does preliminary analysis confirm basic scientific principles? | |

| | | |
|--|--|--|
| | Have experiments validating the concept been designed with synthetic data? | |
| | Has preliminary qualitative risk analysis been documented? | |

TRL 3: Has analytical and experimental proof-of-concept been demonstrated in a laboratory environment?

| Scale | | Comments |
|-------|--|----------|
| | Have experiments validated the predicted capability of technology components? | |
| | Have analytical studies verified performance predictions and produced algorithms? | |
| | Are the technology or system performance metrics established? | |
| | Can science relevant to developing the technology be modeled or simulated? | |
| | Have technology or system performance characteristics been confirmed and documented with representative data sets? | |
| | Do experiments or modeling and simulation (M&S) validate performance predictions of technology capability? | |
| | Do the results of technical application experiments verify the feasibility of such applications? | |
| | Does published research provide evidence for successful integration of technology and system components? | |
| | Have design techniques been identified and/or developed? | |
| | Have scaling studies been initiated? | |
| | Has analysis of alternatives been completed? | |
| | Have programmatic risks been identified and mitigation strategies been documented? | |

TRL 4: Has prototype-scale testing of equipment been completed in a laboratory environment?

| Scale | | Comments |
|-------|---|----------|
| | Have system requirements been finalized and documented? | |
| | Have design requirements been derived from system requirements? | |
| | Have system performance metrics been updated? | |
| | Have scalable technology prototypes been produced? | |
| | Has the performance of components been demonstrated at lab-scale? | |

| | | |
|--|---|--|
| | Has a draft process design been completed? | |
| | Have performance characteristics of a 1 kW lab-scale prototype been demonstrated? | |
| | Have low-fidelity assessments of system integration and engineering been completed? | |
| | Are most system components available (laboratory surrogates in some cases)? | |
| | Have integration studies been started? | |
| | Have initial cost drivers been identified? | |
| | Are scaling studies and architecture diagrams completed? | |
| | Has a formal risk management program been initiated and integrated with project | |

TRL 5: Has pilot-scale testing been demonstrated in a relevant environment?

| Scale | | Comments |
|-------|--|----------|
| | Have system interface (internal and external) requirements been documented? | |
| | Can unavailable system components be simulated using modeling and simulation (M&S)? | |
| | Has a pilot plant been developed at this scale? | |
| | Are process measurements high fidelity? | |
| | Does the pilot plant operate under realistic conditions? | |
| | Have individual plant components been verified and validated through testing? | |
| | Can all process specifications be simulated and validated in pilot plant? | |
| | Has acceptance testing of individual components been performed? | |
| | Has integration of modules/functions been demonstrated in a laboratory environment? | |
| | Have quality and reliability issues been identified and documented (target levels may not yet be set)? | |
| | Has system process design been finalized? | |
| | Has systems engineering begun? | |
| | Is the programmatic risk management plan documented? | |
| | Has a configuration management plan been documented and implemented? | |
| | Has formal review of all documentation been completed? | |
| | Are materials, processes, methods, and design techniques at least moderately developed and verified? | |

TRL 6: Has prototype (semi-works pilot) engineering scale testing been demonstrated in a relevant environment?

| Scale | | Comments |
|-------|--|----------|
| | Have system integration issues been addressed? | |
| | Is the operational environment fully known and documented? | |
| | Has prototype been tested in a simulated operational environment? | |
| | Have performance characteristics been verified and validated in a simulated operational environment? | |
| | Has prototype been tested in real operating environment? | |
| | Has an inventory of external interfaces (e.g. material, solvent, supply chain) been completed? | |
| | Are the components of the pilot plant functionally compatible in realistic problem-solving tests? | |
| | Have control systems been verified and validated in pilot plant? | |
| | Has engineering feasibility been fully demonstrated? | |
| | Have engineering drawings and piping and instrumentation diagrams been finalized? | |
| | Has collection of maintainability, reliability, and supportability data started? | |
| | Have design to cost (DTC) goals been identified? | |
| | Has system requirements specification document been completed? | |
| | Are all changes controlled/documentated using configuration management? | |
| | Has the final technical report been completed? | |

TRL 7: Has equipment/process successfully operated in the relevant operational environment?

| Scale | | Comments |
|-------|---|----------|
| | Has process equipment been tested individually under stressed and anomalous conditions? | |
| | Are modeled components representative of production components? | |
| | Has operational testing of the process in relevant environment been completed? | |
| | Is data for Reliability, Maintainability, and Supportability analysis available? | |
| | Are process equipment and materials available? | |
| | Do prototypes represent actual form, fit, and function? | |
| | Have software algorithms been verified and validated with existing systems? | |
| | Is scaling completed? | |

TRL 8: Has the actual unit successfully operated in a limited operational environment

| Scale | | Comments |
|-------|---|----------|
| | Are all technology/system components form, fit, and function compatible? | |
| | Is technology/system form, fit, and function compatible with operational environment? | |
| | Has technology/system form, fit, and function been demonstrated in operational environment? | |
| | Has technical Developmental Test and Evaluation (DT&E) documentation been completed? | |
| | Are all materials in production and readily available? | |
| | Has maintainability, reliability, and supportability data collection been completed? | |
| | Is maintenance documentation completed and under configuration control? | |
| | Have final architecture diagrams been completed? | |
| | Have software algorithms been verified and validated with existing systems? | |

TRL 9: Has the actual unit successfully operated in the full operational environment (hot operations)?

| Scale | | Comments |
|-------|--|----------|
| | Does technology/system function as defined in Operational Concept document? | |
| | Has technology/system been deployed in intended operational environment? | |
| | Has technology/system been fully demonstrated? | |
| | Has Operational Test and Evaluation (OT&E) been successfully completed and documented? | |
| | Have design to cost (DTC) goals been met? | |
| | Have safety/adverse effects issues been identified and mitigated? | |
| | Has all programmatic documentation been completed? | |

APPENDIX E: DRAFT NOTICE OF PROPOSED RULEMAKING**PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA****PROPOSED NOTICE OF PROPOSED RULEMAKING**

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

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

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

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

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

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

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

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

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

1. The Public Service Commission of the District of Columbia (“Commission”) hereby gives notice, pursuant to Section 34-802 of the District of Columbia Code (“D.C. Code”) and in accordance with Section 2-505 of the D.C. Code,¹⁹² of its intent to amend the following provisions of Title 15 (Public Utilities and Cable Television) of the District of Columbia Municipal Regulations (“DCMR”): Chapter 9, “Net Energy Metering;” Chapter 13, “Rule Implementing the Public Utilities Reimbursement Fee Act of 1980;” Chapter 29, “Renewable Energy Portfolio Standard;” Chapter 36, “Electric Quality of Service Standards;” Chapter 40, “District of Columbia Small Generator Interconnection Rules;” Chapter 41, “The District of Columbia Standard Offer Service Rules;” Chapter 42, “Fuel Mix and Emissions Disclosure Reports;” and Chapter 44, “Submetering and Energy Allocation.” All persons interested in commenting on content of this

¹⁹² D.C. Code § 34-802 (2001); D.C. Code § 2-505 (2001).

notice are invited to submit written comments no later than thirty (30) days after the publication in the *D.C. Register*.

2. On May 31, 2019 the MEDSIS Working Group submitted to the Commission its Final Report containing 32 recommendations and learnings.¹⁹³ In response to two of such recommendations, the Commission is proposing to define the terms “Advanced inverters” and “Non-wires alternative” in the manners shown below.

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

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

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

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

¹⁹³ *Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability (“Formal Case No. 1130”),* Finale Report v1.0 of the DCPSC MEDSIS Stakeholder Working Groups, filed May 31, 2019.

APPENDIX F: INFORMATION REQUEST TO PEPCO ON GREEN BUTTON CONNECT MY DATA AND OTHER DATA SHARING PRACTICES

CIWG R-5.4.3: Commission to Work with Pepco to Enhance Customer Data Access and Protection – Pepco to provide responses to the following questions within 90 days

1. Provide a narrative explaining Pepco’s experience to date with Green Button Connect My Data for commercial customers that includes but is not limited to the following questions;
 - a. How long has it been available and for which customer classes and how many third-party businesses use it;
 - b. How does Pepco review and approve third-party businesses to participate in its CMD program; and
 - c. What are the important lessons learned regarding data security and privacy protection issues?
2. Describe the options for implementing Green Button Connect My Data functionality for all residential customers in the District of Columbia that Pepco has considered or may be considering, including:
 - a. Expected costs;
 - b. A description of the process Pepco will use to review and approve third-party businesses that wish to use Green Button Connect My Data functionality for residential customers;
 - c. A review of Green Button Connect My Data implementation at other utilities, both Exelon affiliates and others, that includes lessons learned regarding data security, privacy protection issues, and whether Exelon data security requirements have excluded any third parties from participation in Green Button Connect My Data at any Exelon utilities;
 - d. Explain how the options for Pepco’s implementation of the Green Button Connect My Data standard for residential customers impacts data security and customer privacy; and
 - e. Explain how Green Button Connect My Data has been used to share Greenhouse Gas emissions data with customers. If it has not been used to share Greenhouse Gas emissions data, then explain whether it can be used for that function.
3. Report on Pepco’s experience implementing DC Code §§ 34-1507 (a)(3) and 8-1774.07, which pertain to customer protections and the circumstances under which aggregated consumption data can be provided.¹⁹⁴

¹⁹⁴ D.C. Code § 8-1774.07 (d)(1) (2001) states that “[w]ithin 30 days after execution of a contract with the SEU, the electric company shall disclose, or allow access to, the aggregate energy use data for every rate class for the electric company customers in the District”

- a. What is Pepco's request and review process for the provision of aggregated customer data; and how often has Pepco provided aggregated customer data and to which parties under these statutes?
 - b. Describe the aggregates provided: which customer classes are involved and what particular fields are provided; and
 - c. Describe any complaints Pepco has received regarding the release of customer data under these statutes.
4. Provide a report on the feasibility of sharing anonymized residential customer data with third parties (other than those identified in Question 3) under existing D.C. law, including but not limited to the following questions:
 - a. Whether anonymized data is already being shared, if so, with whom and under what circumstances; and
 - b. Whether and how customer data can be anonymized in a manner that does not compromise customer privacy or system security.