

**ORDER NO. 88836**

IN THE MATTER OF THE MERGER OF EXELON CORPORATION AND PEPCO HOLDINGS, INC.	* * * * * * *	BEFORE THE PUBLIC SERVICE COMMISSION OF MARYLAND <hr/> CASE NO. 9361 <hr/>
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**Issue Date: September 17, 2018**

This matter comes before the Public Service Commission of Maryland (“Commission”) as a compliance filing stemming from the May 15, 2015 Commission Order granting the Application for Approval of the Merger, subject to certain conditions, submitted by Exelon Corporation (“Exelon”), Pepco Holdings, Inc. (“PHI”), Potomac Electric Power Company (“Pepco” or “Company”), and Delmarva Power & Light Company (“Delmarva”) (hereinafter “Exelon-PHI Merger”). Condition No. 13 to Order No. 86990 required Pepco to file with the Commission a proposal for a pilot project to develop two public purpose microgrids in Pepco’s service territory—one in Prince George’s County and the other in Montgomery County (“County” or together “Counties”).<sup>1</sup> Pepco submitted the instant proposal pursuant to Condition No. 13 on September, 25, 2017,<sup>2</sup> and filed a supplemental filing on February 15, 2018.<sup>3</sup>

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<sup>1</sup> Order No. 86990 (May 15, 2015) at A-18-19, Condition No. 13.

<sup>2</sup> ML #216999: Case No. 9361 - Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids in Prince George’s County and Montgomery County, Maryland by Potomac Electric Power Company (“Pepco Original Proposal”) (Sept. 25, 2017).

<sup>3</sup> ML #219035: Case No. 9361 – Updated Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids in Prince George’s and Montgomery Counties, Maryland by Potomac Electric Power Company (“Pepco Updated Proposal”) (Feb. 15, 2018).

On March 1, 2018, the Commission issued a Notice of Hearing and Request for Comments in connection with the Proposal. The Commission subsequently received written comments filed by the following interested parties: WGL Energy Services, Inc. and WGL Energy Systems, Inc. (together “WGL Energy”);<sup>4</sup> the National Energy Marketers Association (“NEMA”);<sup>5</sup> Montgomery County, Maryland;<sup>6</sup> Direct Energy Services, LLC and Direct Energy Business, LLC, jointly filed with Interstate Gas Supply, Inc. d/b/a IGS Energy (jointly “Direct Energy”);<sup>7</sup> the Apartment and Office Building Association of Metropolitan Washington (“AOBA”);<sup>8</sup> the Pace Energy and Climate Center, Chesapeake Climate Action Network, Fuel Fund of Maryland, Institute for Energy and Environmental Research, Marylanders for Energy Democracy and Affordability, Nuclear Information and Resource Service, and Solar United Neighbors of Maryland (collectively “Pace”);<sup>9</sup> the Maryland Office of People’s Counsel (“OPC”);<sup>10</sup> the

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<sup>4</sup> ML #219863: Case No. 9361 – Comments of WGL Energy Systems, Inc. and WGL Energy Services Inc. (“WGL Energy Comments”) (Apr. 6, 2018).

<sup>5</sup> ML #219873: Case No. 9361 – Comments of the National Energy Marketers Association (“NEMA Comments”) (Apr. 6, 2018).

<sup>6</sup> ML #219875: Case No. 9361 – Montgomery County, Maryland Comments in Response to the Potomac Electric Power Company’s Updated Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids in Prince George’s and Montgomery Counties, Maryland (“Montgomery Cnty Comments”) (Apr. 6, 2018).

<sup>7</sup> ML #219878: Case No. 9361 – Joint Comments of Direct Energy Services, LLC and Direct Energy Business, LLC and Interstate Gas Supply, Inc. d/b/a IGS Energy (“Direct Energy Comments”) (Apr. 6, 2018).

<sup>8</sup> ML #219880: Case No. 9361 – Comments of the Apartment and Office Building Association of Metropolitan Washington on Pepco’s Proposed Public Purpose Microgrid Merger Condition 13 (“AOBA Comments”) (Apr. 6, 2018).

<sup>9</sup> ML #219882: Case No. 9361 – Pace Energy and Climate Center, Chesapeake Climate Action Network, Fuel Fund of Maryland, Institute for Energy and Environmental Research, Marylanders for Energy Democracy and Affordability, Nuclear Information and Resource Service, and Solar United Neighbors of Maryland – Comments on Pepco’s Public Purpose Microgrid Proposal (“Pace Comments”) (Apr. 6, 2018).

<sup>10</sup> ML #219884: Case No. 9361 – Comments of the Maryland Office of People’s Counsel (“OPC Comments”) (Apr. 6, 2018).

Maryland Energy Administration (“MEA”);<sup>11</sup> Prince George’s County, Maryland;<sup>12</sup> and the Commission’s Technical Staff (“Staff”).<sup>13</sup> The Commission also received letters supporting the Proposal from Arena Fuel Services Inc. (“Arena Fuel”),<sup>14</sup> City of Rockville (“Rockville”),<sup>15</sup> Dawson’s Market (“Dawson’s”),<sup>16</sup> Shoppers Food & Pharmacy (“Shoppers”),<sup>17</sup> and the University of Maryland Medical System (“UMMS”).<sup>18</sup>

On April 24, 2018, the Commission held a legislative-style hearing (the “Microgrid Hearing” or “Hearing”) to review Pepco’s Microgrid Proposal whereupon the Commission accepted oral comments from the Company, Montgomery and Prince George’s Counties, Direct Energy, WGL Energy, MEA, OPC, and Staff. Thereafter, Pepco, WGL Energy, MEA, and Staff submitted additional comments in response to the Commission’s bench requests for specific information during the Hearing.<sup>19</sup>

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<sup>11</sup> ML #219886: Case No. 9361 – Maryland Energy Administration Comments Regarding Merger Condition No. 13 – Pepco’s Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids (“MEA Comments”) (Apr. 6, 2018).

<sup>12</sup> ML #219887: Case No. 9361 – Comments of Prince George’s County, Maryland (“Prince George’s Cnty Comments”) (Apr. 6, 2018).

<sup>13</sup> ML #219962: Case No. 9361 – Staff Comments on Pepco Microgrid Proposal (“Staff Comments”) (Apr. 12, 2018).

<sup>14</sup> ML #219508: Case No. 9361 – Arena Fuel Services Inc. Letter Regarding Prince George’s County Public Purpose Microgrid (“Arena Fuel Letter”) (Mar. 20, 2018).

<sup>15</sup> ML #219509: Case No. 9361 – City of Rockville Comments on Pepco Pilot Purpose Microgrid Proposal (“Rockville Comments”) (Mar. 20, 2018).

<sup>16</sup> ML #219510: Case No. 9361 – Dawson’s Market Letter Regarding Public Purpose Microgrid (“Dawson’s Letter”) (Mar. 20, 2018).

<sup>17</sup> ML #219511: Case No. 9361 – Shoppers Food & Pharmacy Letter Regarding Public Purpose Microgrid (“Shoppers Letter”) (Mar. 20, 2018).

<sup>18</sup> ML #219900: Case No. 9361 – University of Maryland Medical System Letter Supporting Pepco Microgrid (“UMMS Letter”) (Apr. 9, 2018).

<sup>19</sup> ML #220340: Case No. 9361 – Pepco Response to Bench Data Requests During Hearing (“Pepco BDR Response”) (May 8, 2018); ML #220343: Case No. 9361 – Staff Response to Bench Data Request Regarding Distribution Investment Deferral Value (“Staff Deferral BDR Response”) (May 8, 2018); ML #220359: Case No. 9361 – Pepco Response to Comments Regarding Public Purpose Microgrid Pilots (“Pepco Response to Comments”) (May 9, 2018); ML #220501: Case No. 9361 – Staff Response to Bench Data Request Regarding Ownership of Generation Facilities (“Staff Ownership BDR Response”) (May 15, 2018); ML #220525: Case No. 9361 – MEA Response to Pepco Request for Funding (“MEA Funding Response”) (May 16, 2018); ML #221060: Case No. 9361 – Response of WGL Energy Systems, Inc. and WGL Energy Services Inc. to Commission Information Request During Hearing (“WGL Energy BDR Response”) (June 27, 2018).

We have reviewed the Company's Proposal and related submissions as well as the various comments received from the interested parties throughout this proceeding. Although Pepco has made a good faith filing as required by Condition No. 13, we find the Proposal lacks critical details that preclude our approval of the proposed pilot microgrid projects at this time. Most significant is the Company's proposal to recover all microgrid costs solely from its Maryland customer base, which is contrary to the Commission's direction in Order No. 86990. The Proposal also lacks essential metrics for a pilot study and a definitive sunset date. For the reasons that follow, we deny Pepco's Microgrid Proposal, as filed, without prejudice. We do not reach the Company's requests for authorization concerning a regulatory asset for microgrid costs or ownership of microgrid distributed energy resources ("DER"), such as battery storage.

### **BACKGROUND**

Pepco agreed as a condition of the multi-party settlement in the Exelon-PHI Merger to develop two pilot public purpose microgrid projects in its service territory. The Commission determined this commitment was consistent with the public interest and adopted Condition No. 13 to Order No. 86990, which provides, in pertinent part, as follows:

Pepco shall, within 18 months following merger close, file with the Commission a proposal for pilot public-purpose microgrid projects to provide enhanced energy services to the selected areas, including during emergency events. The filing shall include a proposal for funding of Pepco's costs in connection with the projects through Pepco's regulated rates and a description of any federal, state, or local contribution to the development of the microgrid projects. The pilot projects shall be developed in the Pepco service territory, with one project in Prince George's County and

one project in Montgomery County. Pepco shall coordinate with Montgomery County and Prince George's County and the Maryland Energy Administration on the selection of the pilot locations, the development of the proposal, and implementation of the projects. The county hosting the microgrid will have final approval and consent of the location. The proposal of the microgrid projects will include, but is not limited to: planning, design, and construction of physical facilities and control technologies, the development of onsite distributed-generation sources, such as combined heat and power, solar photovoltaic, and fuel cells, and operation and maintenance activities; the development and implementation of each microgrid shall be competitively-sourced. Subject to a prudency review by the Commission, Pepco shall install the microgrids within five years after receiving approval from the Commission.<sup>20</sup>

On September 25, 2017, Pepco filed its Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids (“Original Proposal”), developed in coordination with the Counties and subsequently reviewed by MEA.<sup>21</sup> Due to the timing of the final site selections, Pepco continued to work with the Counties to refine certain aspects of the Proposal. The Company filed an Updated Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids on February 15, 2018 (“Updated Proposal”) (together with the Original Proposal, the “Microgrid Proposal” or “Proposal”). The supplemental filing contains the following additional information: updated characteristics for both microgrids; refined microgrid cost estimates; updated microgrid benefit estimates; overview and results of Pepco’s Request for Information; summary of community engagement activities and stakeholder feedback; and a revised construction schedule.<sup>22</sup> The salient components of the Proposal are discussed below, along with brief

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<sup>20</sup> Order No. 86990 at A-18.

<sup>21</sup> Pepco Original Proposal at 1.

<sup>22</sup> *See generally* Pepco Updated Proposal (informing the Commission and interested stakeholders of the additional steps taken by Pepco to refine the Proposal).

summaries of the positions of the various interested parties. Additional details of the Proposal and the parties' separate comments are addressed as needed throughout this Order.

## **I. Pepco's Microgrid Proposal**

Pepco's Microgrid Proposal outlines two pilot projects to construct and deploy two public purpose microgrids in Maryland—one in the Rockville Town Center Area in Montgomery County (hereinafter the "Rockville Microgrid") and the other in Largo, Prince George's County (hereinafter the "Largo Microgrid").<sup>23</sup> Both microgrids are designed to be "fully integrated" public purpose microgrids; that is, they would have the capability of connecting to and disconnecting from Pepco's larger distribution system, to operate as part of the larger grid or independently—in "island" mode—without "sustained loss of service to customers when there is an interruption or other grid disturbance."<sup>24</sup> Accordingly, the microgrids are expected to provide "reliable, secure, and resilient electricity generation, storage, and distribution services to customers."<sup>25</sup>

Pepco specifically seeks Commission authorization for the following:<sup>26</sup>

- 1) To proceed with the development of the identified Montgomery County and Prince George's County microgrids;
- 2) To establish a Regulatory Asset in which the Company will record microgrid costs net of any available grant monies, including depreciation and amortization expense;

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<sup>23</sup> In accordance with Merger Condition No. 13, the hosting Counties had final approval authority over the proposed microgrid site location. Pepco Original Proposal at 9.

<sup>24</sup> Pepco Original Proposal at 8.

<sup>25</sup> *Id.*

<sup>26</sup> Pepco Updated Proposal at 2-3.

- 3) To recover the established Regulatory Asset through a future base distribution rate case, subject to prudence review; and
- 4) To own the battery energy storage systems and the microgrid controllers in each proposed microgrid as well as authorization for a third-party project developer to own the natural gas-fired generation and photovoltaic solar arrays at each proposed microgrid.

A. *The Microgrid Participants*

During times of major grid disruptions, each location would serve a discrete subset of Pepco customers within the designated microgrid footprint (“Microgrid Participants” or “Participants”) and enable their continued operation.<sup>27</sup> These Microgrid Participants would, in turn, provide important community functions or essential services to non-Participants during an emergency event.<sup>28</sup> As proposed, the Largo Microgrid Participants consist of the County administrative building, two medical facilities (including a new medical center currently under construction), a pharmacy, a gas station, and a grocery store.<sup>29</sup> The Rockville Microgrid Participants include multiple grocery stores, gas stations, a pharmacy, a fire station, a police station, a hotel, a Metro station, and several local government and other community facilities “which can act as secondary locations to accommodate the public during periods of prolonged outages.”<sup>30</sup> Pepco anticipates that the uninterrupted operations of these Participants will enable the Largo and Rockville Microgrids to offer essential services to approximately 220,000 and 280,000 individuals within a five-mile radius of each microgrid, respectively.<sup>31</sup>

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<sup>27</sup> Pepco Original Proposal at 16.

<sup>28</sup> *Id.* at 2.

<sup>29</sup> *Id.* at 26.

<sup>30</sup> Pepco Updated Proposal at 5.

<sup>31</sup> Pepco Original Proposal at 26, 31.

## B. *Microgrid Design and Ownership*

Each microgrid would feature a DER mix of solar photovoltaic arrays (“solar PV”), natural-gas-fired generation (“NGG”), and battery energy storage systems (“BESS”).<sup>32</sup> The Largo Microgrid would produce approximately 6.8 MW of total distributed generation (“DG”) capacity—comprising 1.175 MW of solar PV and 5.6 MW of NGG—and an additional 1.6 MW of energy storage.<sup>33</sup> The Rockville Microgrid is proposed to have a total generating capacity of 7.46 MW, consisting of approximately 0.86 MW of solar PV capacity and 6.6 MW of NGG, plus an additional 0.25 MW of energy storage.<sup>34</sup> Each microgrid would also be equipped with control technologies to manage the DER components under normal conditions as well as to facilitate the transition of the microgrid between its grid-connected and stand-alone states.<sup>35</sup> The DER components would be capable of sustaining 100 percent of the maximum load of the Microgrid Participants under all operating conditions,<sup>36</sup> and their expected service life is projected to be at least 20 years.<sup>37</sup>

Under the Proposal, a third-party developer would be competitively selected to develop and implement the microgrid. The developer, or another third party—as determined by the developer—would construct, own and operate the solar PV and NGG

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<sup>32</sup> *Id.* at 2-3.

<sup>33</sup> Pepco Updated Proposal at 10.

<sup>34</sup> *Id.* at 6.

<sup>35</sup> Pepco Original Proposal at 22.

<sup>36</sup> *Id.* at 23. Pepco notes an exception for the new Prince George’s Regional Medical Center in the Largo Microgrid. That facility will have its own backup diesel generation, under its own control. The Largo Microgrid will, therefore, serve as a tertiary power supply to cover 2 MW of the hospital’s load. Pepco Updated Proposal at 9-10.

<sup>37</sup> Pepco Updated Proposal at 3.



resources within each microgrid.<sup>38</sup> However, Pepco would own the BESS and the microgrid control systems as distribution system assets.<sup>39</sup> The selection of the third-party developer for the solar PV and NGG components would follow a competitive procurement process.<sup>40</sup> Likewise, Pepco would engage a separate, competitive process for procuring the BESS and microgrid controllers.<sup>41</sup>

### C. *Microgrid Costs and Cost Recovery*

Pepco estimates the total cost associated with both microgrids to be \$45 million<sup>42</sup> – approximately \$26.3 million for the Rockville Microgrid and \$18.7 million for the Largo Microgrid – inclusive of capital costs and O&M costs, net of market revenues.<sup>43</sup> The Proposal also establishes a contingency of \$18.4 million, which when added to the estimated costs raises the total cost of both projects to \$63.4 million.<sup>44</sup> Pepco proposes to recover the total \$63 million in microgrid costs, with contingencies, from all of Pepco’s Maryland electric distribution customers, regardless of the customer’s proximity to either microgrid.<sup>45</sup> To that end, the Company requests permission to

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<sup>38</sup> Pepco Updated Proposal at 3; *see also* Pepco Original Proposal at 40-42 (describing the competitive procurement process for selecting the developer). In its Original Proposal, however, Pepco reserved the ability to seek authorization from the Commission to own any microgrid DER “if it can do so at a lower cost than that provided through the competitive procurement process.” Pepco Original Proposal at 42. This aspect of Original Proposal is absent from Pepco’s Updated Proposal but was reaffirmed at the April 24, 2018 Hearing. The question of whether Pepco may legally own microgrid generation assets under the current state of Maryland law is mooted by the Commission’s decision based on the merits of the Proposal.

<sup>39</sup> Pepco Original Proposal at 5.

<sup>40</sup> *Id.* at 40. On October 31, 2017, Pepco issued a Request for Information (“RFI”) to solicit feedback from market participants on the Proposal and identify potential developers. Pepco Updated Proposal at 15. Based on this information, Pepco proposes to issue one or more microgrid Requests for Proposals (“RFP”) upon approval of the instant Proposal. Pepco Updated Proposal at 19. Once the third-party vendors are selected, Pepco would proceed to contract negotiations. Pepco Updated Proposal at 19.

<sup>41</sup> Pepco Updated Proposal at 3.

<sup>42</sup> Pepco presents this cost estimate on a net present value basis. *Id.* at 2.

<sup>43</sup> *Id.* at 2, 22-23. In addition to DER costs associated with generation and energy storage, the total project costs also include microgrid-related distribution plant costs, related interconnection and operational costs. *See* OPC Comments at 3.

<sup>44</sup> Pepco Updated Proposal at 2, 23.

<sup>45</sup> *Id.* at 23.

establish a Regulatory Asset for recording the microgrid costs, including depreciation and amortization expense.<sup>46</sup> Once established, the Regulatory Asset would accrue a return based upon Pepco's authorized rate of return. Pepco would then seek to recover those costs, net of any available grant monies, in a future base distribution rate case, subject to a prudency review.<sup>47</sup> The Company did not identify any additional sources of funding, private or public.<sup>48</sup> Net of any such outside funds, Pepco's customers would continue pay for microgrids for the duration of their 20-year expected service lives.

Pepco estimates an annual revenue requirement for the project of approximately \$6.2 million—based on levelizing over 20 years the total project cost of \$63.4 million on a net present value basis.<sup>49</sup> Therefore, the monthly bill impact on a typical residential customer using 812 kWh per month is not expected to exceed \$0.36 per month, when levelized over 20 years.<sup>50</sup>

*D. Anticipated Microgrid Benefits*

In addition to the public purpose function of the microgrids, the Proposal posits several benefits from the microgrids—both quantifiable and unquantifiable. Quantifiable benefits include \$13.4 million in savings from the deferral of two distribution system projects.<sup>51</sup> Specifically, the Rockville Microgrid would allow Pepco to defer the planned construction of a White Flint Substation by two years, which in turn would allow the Company to defer the Sligo-to-Linden 69 kV distribution project by one year.<sup>52</sup> Pushing the recovery of these project costs by one to two years would create a benefit to

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<sup>46</sup> *Id.* at 26.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.* at 21.61

<sup>49</sup> Pepco Updated Proposal at 23.

<sup>50</sup> *Id.* at 2, 23.

<sup>51</sup> *Id.* at 23.

<sup>52</sup> Pepco Original Proposal at 52-53.

customers commensurate with the time value of money savings.<sup>53</sup> Additionally, Pepco estimates another \$7.6 million in estimated outage avoidance benefits for the Microgrid Participants.<sup>54</sup> According to Pepco, these Participants “will benefit from enhanced reliability due to the presence of the microgrid[s]” and “avoid costs associated with interruptions in electric service.”<sup>55</sup>

The Proposal also identifies unquantified reliability benefits to the broader base of Pepco’s Maryland customers and community resiliency benefits as a result of the microgrids. Pepco also suggests that, as proposed, the two projects would allow for “clean energy procurement, improvements to [Pepco’s] distribution system, and valuable insights into best practices for future microgrid development.”<sup>56</sup> Additionally, by integrating the microgrids with the operation of its distribution system, Pepco plans to dispatch microgrid assets to support the system as needed, such as during times of high electric loads.<sup>57</sup>

#### *E. Pilot Project Metrics*

Pepco proposes to track, evaluate, and report on the two microgrids for a period of five years following commencement of operations.<sup>58</sup> This is not a sunset provision for the project, however, as the microgrids “are expected to remain operational for 20 years or more.”<sup>59</sup> As proposed, Pepco would prepare and file two evaluation reports with the Commission concerning the pilot microgrids. The first of these reports—the interim evaluation report—would be filed two years after the microgrids commence operations,

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<sup>53</sup> *Id.* at 53.

<sup>54</sup> Pepco Updated Proposal at 23.

<sup>55</sup> Pepco Original Proposal at 53.

<sup>56</sup> *Id.* at 54-55.

<sup>57</sup> *Id.* at 4.

<sup>58</sup> *Id.* at 64.

<sup>59</sup> *Id.*

and the final report would be filed at the five-year mark.<sup>60</sup> Pepco would collect a range of operational and Microgrid Participant data for both microgrid locations, including data on customers who use Participant services during distribution outages.<sup>61</sup> Pepco would then analyze and use this data to report on the reliability and resiliency impacts of the pilot projects, including microgrid system performance, security, and benefits to other distribution customers. The reports would also assess the integration of renewables and examine enhancements to community resiliency, such as mitigation of economic impacts from power outages, community protection, and community revitalization.<sup>62</sup>

## **II. Positions of the Interested Parties**

The general positions of the interested parties with regard to the Proposal are summarized as follows:

### *A. Supporting the Proposal*

Interested parties in support of Pepco's Proposal as filed include Arena Fuel, City of Rockville, Dawson's, Shoppers, UMMS, Montgomery County, and Prince George's County. The parties highlight the key benefit that area residents would have uninterrupted access to necessary goods and services, including life-saving medical services.<sup>63</sup> The Counties further point to the anticipated enhancements to resiliency and improvements to public services, including emergency management and key

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<sup>60</sup> Pepco Original Proposal at 66.

<sup>61</sup> *Id.* at 67-68. Pepco would track various microgrid operating data, such as the energy output, peak energy, hours of operation, air emission, and outage statistics for all the operating elements. Pepco would also track data pertaining to facility characteristics, outage statistics, power quality, energy usage, peak demand, and electricity costs under different operating conditions (e.g., blue sky operations, islanding operations, etc.). *Id.*

<sup>62</sup> Pepco Original Proposal at 68-69.

<sup>63</sup> *See* Arena Fuel Letter at 1; Dawson's Letter at 1; Shoppers Letter at 1; UMMS Letter at 1; Montgomery Cnty Comments at 1; Prince George's Cnty Comments at 3.

administrative functions.<sup>64</sup> Additionally, both Counties would make in kind land contributions for housing the microgrids' generation assets.<sup>65</sup>

Three parties—Direct Energy, WGL Energy, and MEA—also support the Proposal but qualify their support upon certain modifications or conditions. Direct Energy recommends that Pepco be required to competitively bid the BESS and microgrid controller components of each microgrid in addition to generation.<sup>66</sup> Direct Energy also proffers several adjustments to Pepco's competitive procurement process to enhance the RFP bid process and to ensure procedural fairness and oversight.<sup>67</sup>

WGL Energy supports Pepco's commitment to pursue competitive procurement but nevertheless recommends modifications that would foster competitive energy markets in Maryland. Namely, WGL Energy proposes that Pepco be precluded from owning DER; rather, Pepco should be required to competitively select a third party developer(s) to install, own and operate microgrid generation as well as battery storage.<sup>68</sup> WGL Energy also recommends that only microgrid customers should pay for microgrid services.<sup>69</sup>

MEA conditions its support on four modifications to the Proposal. First, Pepco ratepayers should not be required to pay more than the amount of the quantified, demonstrable benefits actually accrued to them.<sup>70</sup> Second, ratepayers should not be responsible for costs related to the generation assets.<sup>71</sup> Third, the BESS should not be

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<sup>64</sup> Montgomery Cnty Comments at 1; Prince George's Cnty Comments at 2.

<sup>65</sup> See Hr'g Tr. At 133, 47-55.

<sup>66</sup> Direct Energy Comments at 6, 12-13.

<sup>67</sup> *Id.* at 6-12.

<sup>68</sup> WGL Energy Comments at 2, 4-12.

<sup>69</sup> *Id.* at 2, 12-14.

<sup>70</sup> MEA Comments at 4-5.

<sup>71</sup> *Id.* at 4.

subject to rate recovery under the Proposal.<sup>72</sup> Lastly, the Proposal should comply with the Commission’s guidelines for pilot programs, as established in Order No. 88438.<sup>73</sup>

*B. Opposing the Proposal*

Interested parties opposed to Pepco’s Proposal include AOBA, Pace, OPC, and NEMA. AOBA recommends that the Proposal be denied because it “imposes cross-subsidies upon Pepco’s general ratepayers for the benefit of microgrid customers and otherwise is contrary to the public interest.”<sup>74</sup> In general, AOBA opposes Pepco and other utility companies operating public purpose microgrids and related service offerings, and, to that end, recommends that the Commission consider alternative approaches to microgrid deployment, such as through public private partnerships.<sup>75</sup>

In their joint comments, the Pace commenters generally support the development of community microgrids but note that Pepco’s Proposal fails to include a sufficiently detailed cost-benefit analysis for assessing the prudence of the Largo and Rockville microgrid projects.<sup>76</sup> Pace, therefore, recommends a more detailed methodology and additional data sets that would permit the Commission to evaluate the Proposal more fully.<sup>77</sup>

OPC also recommends that the Commission reject the Proposal for failure to demonstrate the prudence of the microgrid investments.<sup>78</sup> Like Pace, OPC also criticizes

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<sup>72</sup> *Id.* at 8-9.

<sup>73</sup> *Id.* at 5 (citing *In the Matter of the Request of Baltimore Gas and Electric Company for Approval of a Prepaid Pilot Program and Request for Waivers of COMAR and Commission Orders*, Case No. 9453, Order No. 88438, at 19-21 (Oct. 25, 2017)).

<sup>74</sup> AOBA Comments at 1.

<sup>75</sup> *Id.* at 1-2, 3-4, 12.

<sup>76</sup> Pace Comments at 3.

<sup>77</sup> *Id.* at 5.

<sup>78</sup> OPC Comments at 15.

Pepco’s failure to include a completely quantified cost-benefit analysis.<sup>79</sup> Whereas OPC notes that the Proposal is premised “in large part on benefits that . . . cannot be quantified,” the Proposal fails to demonstrate how the microgrids “would increase reliability or resiliency for customers other than the few customers connected to the microgrid, or the relatively limited number of other customers that could realistically utilize the [microgrids] during extended outages.”<sup>80</sup> OPC objects to Pepco’s proposal to place sole responsibility for the \$63.4 million in estimated microgrid costs on the Company’s Maryland customer base.<sup>81</sup>

NEMA challenges aspects of Pepco’s Proposal and generally recommends that microgrid projects should rely on competitive markets to provide DER solutions. NEMA contends the Proposal defies the Commission’s long-standing history of “implementing state policy in favor of competitive energy markets” insofar as it would allow Pepco to own the BESS and microgrid controllers, and potentially the DG assets.<sup>82</sup> NEMA further objects to Pepco’s request to recover all microgrid project costs solely through rate base as being contrary to state law and inherently anti-competitive.<sup>83</sup>

*C. No Opinion on the Proposal*

Staff abstains from recommending that the Commission either approve or reject the Proposal. Staff concludes, however, that the proposed public purpose microgrid projects “would not result in lower costs to customers or provide reliability benefits that

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<sup>79</sup> *Id.* at 10.

<sup>80</sup> *Id.* at 9-10.

<sup>81</sup> OPC Comments at 4.

<sup>82</sup> NEMA Comments at 8-9.

<sup>83</sup> *Id.* at 10.

match or exceed the program costs based on normal reliability improvement programs.”<sup>84</sup>

If the Commission approves the Proposal, Staff recommends that the Commission approve only the Rockville Microgrid project and limit cost recovery for the project to a traditional base rate case filing.

### **COMMISSION DECISION**

We commend the Company for its good faith filing and note that none of the interested parties claim that the Proposal fails to meet the filing requirement under Merger Condition No. 13. The Proposal procedurally follows a series of discussions, reports, and submissions over several years regarding the development of microgrids in Maryland, including a June 23, 2014 report by the Resiliency Through Microgrids Task Force (“Microgrids Task Force Report”)<sup>85</sup> as well as a previous proposal by the Baltimore Gas and Electric Company (“BGE”) to construct, own and operate two public purpose microgrids in Case No. 9416, which the Commission denied in Order No. 87669.<sup>86</sup> While it is evident that Pepco attempted to address the Commission’s concerns with BGE’s proposal, we nevertheless deny the Proposal, without prejudice, and explain our reasoning in the sections below.

#### **I. Cost Recovery**

Pepco’s total project cost of \$63.4 million, with contingencies, includes approximately \$31.7 million in third-party developer capital and O&M costs, which

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<sup>84</sup> Staff Comments at 1.

<sup>85</sup> The Microgrids Task Force was charged with studying “the statutory, regulatory, financial and technical barriers to the deployment of microgrids in Maryland.” MEA, *Maryland Resiliency Through Microgrids Task Force Report*, at 1 (“Microgrids Task Force Report”) (June 23, 2014), available at <http://energy.maryland.gov/Pages/resiliency.aspx> (last visited Aug. 3, 2018).

<sup>86</sup> *In re Baltimore Gas and Electric Company’s Request for Approval of its Public Purpose Microgrid Proposal*, Case No. 9416, Order No. 87669, at 1-2, 18 (“BGE Proposal”) (July 19, 2016).



Pepco proposes to pass through to its Maryland ratepayers.<sup>87</sup> Indeed, all of the microgrids' generation- and distribution-related costs would be socialized across the Company's nearly 573,000 distribution customers in Maryland. This translates to an estimated rate impact of \$0.36 per month for a typical residential customer using 812 kWh/month.

A. *Lack of Microgrid Participant Contribution*

Under the cost causation principle, a principle widely used in public utility ratemaking, the concept of "beneficiary pays" requires that rates for service reflect the costs actually caused by the customer who must pay those rates. Several interested parties, including WGL Energy, MEA, Staff, and OPC argue that the same principle should apply, at least in part, to the Proposal. We agree. In Order No. 86990, the Commission specifically stated the following with regard to microgrid funding and cost recovery:

At this time, although we recognize the potential to serve the community by providing, among other public purposes, electricity for citizens during periods of extended outages, we do not endorse the prudence of ratepayer-funded public-purpose microgrid projects at this time, nor do we endorse the concept that ratepayers alone should be solely responsible for funding such projects. These microgrids have the potential to serve communities as a whole, not solely as ratepayers."<sup>88</sup>

Despite this unequivocal language, Pepco proposes to socialize all costs associated with both microgrid projects—and assign all financial risk—to its Maryland ratepayers alone.

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<sup>87</sup> Pepco Updated Proposal at 17. The Commission notes that the developer's cost estimates are net of PJM market sales revenue. Based on Table 4-2 in the Proposal, Pepco anticipates that the developer's costs will still exceed market revenue by \$9.2 million for the Largo Microgrid and by \$10.9 million for the Rockville Microgrid. *Id.* at 17, Table 4-2. Staff and Pepco acknowledge uncertainties surrounding key market drivers. If actual market revenues fall short of projected values, then the rate impact to Pepco ratepayers will likely be higher.

<sup>88</sup> Order No. 86990 at 77.

There is no financial risk-sharing by the Company, the developer, the Microgrid Participants, or the Counties, all of which stand to benefit uniquely from the microgrids.<sup>89</sup>

In this regard, we are disappointed in the lack of willingness by others, including the two Counties, to contribute financially to at least a portion of the costs of the two proposed microgrids. As direct beneficiaries of the microgrids, the Microgrid Participants and the Counties would benefit most from the proposed generation capacity. When the larger electric grid is disrupted, the microgrids—in island mode—would continue to provide power to the Participants and enable them to continue their operations and provide a variety of essential services to the local community, such as gasoline, fuel, food, medication, and medical services. Pepco estimates the value of this avoided outage cost benefit alone is approximately \$7.6 million. Yet, none of the Microgrid Participants are willing to pay the value of their avoided outage costs or even a portion thereof.

Likewise, the Rockville and Largo Microgrids would allow Montgomery County and Prince George’s County to continue operating government facilities within their microgrid footprints and sustain key administrative functions during major disruption events. These services include Montgomery County’s alternative 911 Center and Alternative Emergency Operations Center as well as the government services currently operating in Prince George’s Upper Marlboro area. According to Montgomery County, “in a . . . really large scale emergency, the continuity of government operations is

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<sup>89</sup> Pepco argues that all of the stakeholders involved in the microgrids bear substantial risk, including risk of development cost overruns, risk of operating costs overruns, financing risk, environmental damage, islanding operation risk, blue sky operation risk, credit risk, and risks associated with future prudency review and cost recovery. Pepco Response to Comments at 8-9.

critical.”<sup>90</sup> The proposed microgrids would therefore be a significant part of the Counties’ emergency planning preparedness and long-term recovery plans.<sup>91</sup> Rather than agree to make any financial contribution to the Proposal, the Counties focus on in-kind contributions in real estate to house the proposed microgrid equipment, noting that these sites could be useful to the Counties in other ways.<sup>92</sup> We do not dismiss the contention that these real property contributions have value. However, given the number of benefits due to be received by County facilities and their continued operations during extended grid outages, we believe that the Counties—like the other Participants—should share in the risks of the microgrid projects. In this regard, the lack of any financial contribution on their part runs counter to long-standing principles of cost causation.

The Commission’s views on microgrid cost-sharing in Order No. 86990 are further confirmed by the Microgrid Task Force Report, which provides that while it would be appropriate to socialize a portion of public purpose microgrid costs across a utility’s rate base, a portion of the costs could be recovered directly from the microgrid customers, as “certain microgrid benefits accrue directly to the customers who are served by the microgrid.”<sup>93</sup> Under PUA § 4-503(b)(1) a utility company may not “charge, demand, or receive from a person compensation that is greater or less than from any other person under substantially similar circumstances.” According to the Report, public purpose microgrid customers are not substantially similar to the utility’s other customers insofar as the former group would receive unique services from the microgrid—e.g., local generation, advanced controls, and increased resiliency—in addition to the services

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<sup>90</sup> Hr’g Tr. at 149.

<sup>91</sup> See Pepco Updated Proposal at 7-8, 12; *see also* Hr’g Tr. at 149.

<sup>92</sup> See Hr’g Tr. at 147.

<sup>93</sup> Microgrid Task Force Report at 35.

received by the latter group.<sup>94</sup> In the absence of Participant contribution to costs, Pepco’s non-Participant customers would have no choice but to subsidize the Microgrid Participants for the additional microgrid services, which is inconsistent with § 4-503(b)(1).

*B. Other Funding Opportunities*

The Proposal also suffers from a lack of additional funding to mitigate the financial burden on Pepco’s Maryland ratepayers. When Pepco submitted this filing, the Company did not identify any federal or state funding. The Company has since continued “to research and identify federal, state, and local grant funding opportunities to help offset the cost of the [Proposal].”<sup>95</sup> While we commend Pepco for engaging the Counties, MEA, and the U.S. Department of Energy (“DOE”) to discuss funding possibilities, we believe the Company could have gone further to pursue potential funding sources.<sup>96</sup>

In response to a formal inquiry by the Company following the Microgrid Hearing, MEA identified several funding programs that could be applied to public purpose microgrids, depending on project specifications. These grant sources include the Commercial Clean Energy Grant Program (for qualifying renewable generation

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<sup>94</sup> *Id.* at 34.

<sup>95</sup> Pepco Updated Proposal at 21.

<sup>96</sup> While Pepco states it could not identify any federal funding opportunities, one of Pepco’s sister companies obtained funding support from the U.S. Department of Energy for its microgrid “cluster” in Chicago, Illinois. ComEd secured two DOE grants—one for developing and testing a microgrid controller that will control the cluster of microgrids, and another grant for studying how large amounts of solar PV and battery storage can be integrated into a microgrid. Business Wire, *ComEd Approved to Build One of First Microgrid Clusters in the Nation*, News Release (Feb. 28, 2018), available at <https://www.businesswire.com/news/home/20180228006367/en/ComEd-Approved-Build-Microgrid-Clusters-Nation> (last visited July 30, 2018).

components),<sup>97</sup> the Solar Canopy Grant Program,<sup>98</sup> the Combined Heat and Power Grant Program (for qualifying combined heat and power or “CHP” systems),<sup>99</sup> the Energy Storage Tax Credit (for energy storage systems).<sup>100,101</sup> Pepco did not formally apply for any of these grants.<sup>102</sup> Had Pepco filed an application, the Company could have, at minimum, discussed with MEA Pepco’s qualifications for one or more of these grant programs.<sup>103</sup> Further to this point, we observe that Pepco missed an opportunity to incorporate fundable components in its microgrid design. Neither of the proposed microgrids includes CHP, even though MEA has provided CHP grants to “healthcare and other critical infrastructure facilities to promote combined heat and power systems”<sup>104</sup> Grants aside, Pepco could have also explored creative funding solutions with the Counties and private stakeholders, especially in view of Montgomery County’s

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<sup>97</sup> MEA, <http://energy.maryland.gov/business/Pages/incentives/cleanenergygrants.aspx> (last visited July 27, 2018).

<sup>98</sup> MEA, <http://energy.maryland.gov/business/Pages/incentives/PVEVprogram.aspx> (last visited July 27, 2018).

<sup>99</sup> MEA, <http://energy.maryland.gov/business/Pages/MEACHP.aspx> (last visited July 27, 2018).

<sup>100</sup> MEA, <http://energy.maryland.gov/business/Pages/EnergyStorage.aspx> (last visited July 27, 2018).

<sup>101</sup> MEA Funding Response at 1. MEA also offers the Commercial and Industrial Grant Program and the Jane E. Lawton Conservation Loan Program. *Id.*

<sup>102</sup> Hr’g Tr. at 31. The Company explained at the Hearing that the decision not to apply for funding was based on its understanding from MEA that state funds were not available. *Id.* MEA responded that it never received a formal application for funds from Pepco. Without an application, MEA could not speculate or provide “provisional or final determinations regarding the availability of funding...” MEA Funding Response at 1-2.

<sup>103</sup> On June 29, 2018, PHI filed its 2017 Across the Fence Report pursuant to Merger Condition No. 27 of Order No. 86990, comparing the performance and status of all the utilities within the Exelon family. ML #221109: Case No. 9361 – Exelon Utilities Annual Across the Fence Report For Year 2017 (June 29, 2018). The Report includes a summary of the microgrid initiatives currently being pursued in the various Exelon jurisdictions. In the Delmarva region, PHI applied for and received a \$250,000 grant from MEA “for installing batteries to support Chesapeake College’s critical loads during emergency scenarios and support the electrical grid.” *Id.* at 38.

<sup>104</sup> MEA Comments at 10.

successful public-private partnerships to develop and fund two campus-style microgrids.<sup>105</sup>

*C. Cost-Benefit Analysis and Cost Effectiveness*

Several of the interested parties conclude that the proposed public purpose microgrid projects are not cost-effective based on the microgrids' quantifiable benefits and anticipated costs. The anticipated quantifiable benefits total approximately \$21 million. The projects' estimated costs will therefore exceed the quantified benefits by over \$40 million, which results in a cost-to-benefit ratio of 3:1. The majority of the stated quantified benefits consist of the \$13.4 million in deferred distribution construction savings at the Rockville location. Staff now estimates, however, that the deferral savings are lower—at \$6.8 million—which further reduces the cost-benefit ratio for the Rockville project.<sup>106</sup> Despite those savings, Pepco will necessarily proceed with the White Flint substation and Sligo-to-Linden distribution project at a later time and incur the associated costs then.

To justify socializing the costs across its Maryland customer base, Pepco states that the proposed microgrids offer significant, indirect benefits that cannot be quantified at this time—namely, improved community resiliency and improved distribution grid reliability and resiliency.<sup>107</sup> The Proposal does not provide a detailed explanation of

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<sup>105</sup> Montgomery County has funded two campus-style microgrids through public-private partnership. The private partner will own and operate the microgrid system during its 25-year service life. In return, the County will purchase energy under a power purchase agreement during the microgrid's service life. AOB Comments at 13-14.

<sup>106</sup> Following the Microgrid Hearing, Staff provided the Commission with its analysis of Pepco's estimated distribution investment deferral value. Whereas Staff's original benefit-to-cost ratios were 7% and 78% for the Largo and Rockville projects, respectively, Staff's ratio calculation for the Rockville project is reduced to 52% as a result of Staff's new deferral savings estimate. Staff Deferral BDR Response at 6.

<sup>107</sup> Pepco states it is unaware of any "industry-accepted methods to forecast the societal benefits provided by a public purpose microgrid from a financial perspective." Pepco BDR Response at 9.

these unquantifiable benefits, however.<sup>108</sup> While the Largo and Rockville Microgrid Participants could potentially offer essential services to the 220,000 and 298,000 individuals located within five miles of each microgrid, respectively, the Proposal provides no additional details regarding the number of non-Participants that are reasonably expected to be served by each microgrid. Nor has Pepco demonstrated that ratepayers outside of the microgrids' five-mile radius will, in fact, travel to the microgrids and use the services offered there.<sup>109</sup> Pepco explains that the purpose of the microgrid pilots is to allow the Company to collect non-Participant and other data that would then be used to develop and optimally implement future microgrids in Maryland.<sup>110</sup> While Pepco may, over time, gather sufficient data to quantify this benefit, we must evaluate the Proposal based on the information before us. Without more, we find that a benefit-to-cost ratio of 0.33, inclusive of contingencies, would not—as a matter of prudence—justify the estimated increase of \$0.36 per month that Pepco's residential customers would have to pay. We are also concerned that Pepco ratepayers will continue to pay this cost for the 20-year service life of the microgrid assets, which in our view exceeds any reasonable time frame for a pilot study. Furthermore, if the pilot projects are successful by some measure, and Pepco deploys additional microgrids in its service territory, the overall cost to ratepayers under this cost recovery method would rise significantly.

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<sup>108</sup> See WGL Energy Comments at 14; see also MEA Comments at 7; Pace Comments at 4; AOBA Comments at 26.

<sup>109</sup> According to MEA, any benefit to ratepayers would be experienced almost exclusively within the immediate vicinity of the microgrid and would likely depend on other alternatives as well as the scale of the outage. Hr'g Tr. at 198-99.

<sup>110</sup> Pepco Original Proposal at 4, 8-9; see also Pepco Response to Comments at 5.

As previously stated in Order No. 86990, the Commission recognizes that public purpose microgrids have the potential to serve the community by providing electricity for public purposes during periods of extended grid outages.<sup>111</sup> However, the Commission refused then to endorse the prudence of ratepayer-funded public purpose microgrids or endorse the concept that ratepayers alone should be solely responsible for funding such project. We similarly decline to do so here. Several parties recommend that the Company and the Microgrid Participants should bear most, if not all, of the microgrid costs. Pepco posits, however, that requiring the Participants to pay even 50% of the microgrid costs would more than double their monthly distribution charges.<sup>112</sup> If the Participants became responsible for all of the microgrid costs, their distribution charges would increase by 220%.<sup>113</sup> We are not inclined at this time to find that the costs associated with public purpose microgrids should be borne solely by the microgrid customers. However, given the proposed projects' direct benefits to the Microgrid Participants and the Company as well as the funding options discussed herein, we see no reason why Pepco cannot finance a percentage of the total microgrid costs through a combination of Participant contributions, government grant programs, and funding arrangements with the Counties or private market participants. Because we do not approve the Proposal's cost recovery methodology, we do not reach the Company's requests for authorization to establish and recover the Regulatory Asset for microgrid costs.

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<sup>111</sup> Order No. 86990 at 77.

<sup>112</sup> Pepco Response to Comments at 7.

<sup>113</sup> Hr'g Tr. at 71-72.



## II. Pilot Study Metrics and Sunset Date

In Case No. 9453, by Order No. 88438, the Commission set forth factors advocated by MEA for successfully developing and evaluating a pilot billing program by BGE.<sup>114</sup> Accordingly, the Commission directed BGE to develop its pilot proposal to address the following:<sup>115</sup>

- Clear goal(s) established at the beginning of pilot program development;
- Evaluation metrics linked to those goal(s) that will inform whether the goal(s) are achieved;
- An evaluation plan developed before final pilot approval;
- An estimate of pilot program implementation costs;
- Public sharing of key pilot program data after the pilot is complete, and at regular intervals during the pilot if appropriate;
- Public review of pilot results by the Commission;
- A clear transition plan for current customers (e.g., customers could remain on the pilot tariff until the Commission evaluations the results and reaches a decision, but enrolling new customers is prohibited); and
- A firm sunset date – any extension, amendment or permanent authorization must be affirmatively approved by the Commission.

MEA recommends that the same factors be applied to this pilot Microgrid Proposal. The appropriate factors for evaluation may vary depending on the design and goals of the proposed pilot. Although the Commission enumerated the above factors vis-

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<sup>114</sup> Order No. 88438 at 19-20.

<sup>115</sup> *Id.* at 20.

à-vis BGE's prepaid billing pilot, we note that several of the factors are also relevant and appropriate for our assessment of the instant proposed pilot—namely, the inclusion of measurable evaluation metrics, public review, and a sunset provision.

Pepco argues in response to MEA's suggestion that the Company has already complied with the above-listed evaluation parameters. While this may be true for some of the factors, the Proposal is lacking in other elements. The most obvious area is the omission of a firm sunset date for the pilot microgrid projects. The Commission previously stated that a pilot study should set a firm post-pilot timeline outlining milestones for stakeholders to: evaluate pilot program results; present those results to the Commission and account for a Commission determination how to proceed.<sup>116</sup> In lieu of setting a definitive end date and post-pilot evaluation period, the Proposal simply identifies a 20-year service life for the microgrid assets. We neither construe nor accept the microgrid's 20-year service life as a reasonable sunset date for the proposed pilot projects.

In addition to a firm sunset provision, the Proposal should include specific measurables, made available for public review, to evaluate the success of the pilot and its cost-effectiveness. Pepco proposes to track various microgrid and Participant data, which it would use to generate two reports—one interim report after two years of operation, and a final report three years later. Notwithstanding the stated metrics, the Proposal is less specific with regard to the collection and evaluation of non-Participant data. Moreover, it does not address how the Company plans to quantify the alleged community benefits—i.e., the provision of essential services to non-Participants during prolonged outages,

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<sup>116</sup> Order No. 88438 at 20.

community revitalization and economic development—on which the Proposal principally relies to justify socializing all microgrid costs across Pepco’s entire Maryland customer base. Where, as here, the projects’ quantifiable benefits and costs produce a benefit-to-cost ratio well below the passable ratio that correlates to a prudent investment, the Proposal should define clear cost benefit goals to clarify the level of performance that would otherwise demonstrate prudence for cost recovery. We also note that the Proposal’s reporting schedule ends after five years of microgrid operation—even though both microgrids would remain operational for many years thereafter.

### **III. Ownership of Energy Storage and DER**

Here, Pepco requests authorization to own the BESS and microgrid controller components of both microgrids. Notably, Pepco also reserves the option of owning the microgrid DG assets, under PUA § 7-510(c)(6), if it can do so at a cost lower than that provided through competitive procurement.<sup>117</sup> PUA § 7-510(c)(6) provides, in pertinent part, as follows:

In order to meet long-term, anticipated demand in the State for standard offer service and other electricity supply, the Commission may . . . allow an investor-owned electric company to construct, acquire, . . . and operate its own generating facilities, and transmission facilities necessary to interconnect the generating facilities with the electric grid, subject to appropriate cost recovery.

Several parties recommend against allowing Pepco to own and operate the microgrid DER, including energy storage, asserting that Pepco’s ownership of DG is

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<sup>117</sup> Pepco Original Proposal at 42; Hr’g Tr. at 121-22. While Pepco does not concede the proposed competitive procurement process for selecting a microgrid developer, the Company admittedly intends to seek the Commission’s approval to own and operate the microgrids—including the DER components—“in the absence of . . . an acceptable Developer proposal” and “if it can do so at a lower cost.” Pepco Original Proposal at 5.

antithetical to the divestiture of utility-owned generation in Maryland and the spirit and purpose of the Electric Customer Choice and Competition Act of 1999.<sup>118</sup> These parties have legal and practical concerns with the Company's request to own the BESS and suggestion that it may, under the right conditions, dismiss the lowest competitive bid and develop the microgrids itself. At present, we have yet to establish a State-wide regulatory framework under the PUA to govern the ownership and regulation of battery energy storage and other microgrid DER assets, including generation facilities.<sup>119</sup> Whereas we deny the Proposal for cost recovery and other reasons, we do not take up the legal issue concerning Pepco's ownership of battery storage and, potentially, the DG components at this time.

### **CONCLUSION**

Pepco's Proposal satisfies the filing requirement under Condition No. 13 to Order No. 86990. We commend Pepco for endeavoring to design a pilot study that builds upon the regulatory discussions thus far concerning public purpose microgrid deployment in Maryland. We further appreciate the Company's efforts to address the Commission's prior comments and concerns regarding BGE's public purpose microgrid proposal in Case No. 9416. While the Proposal represents a good faith effort in the right direction, we note that other jurisdictions have already begun to explore innovative microgrid concepts and solutions. For instance, notable examples of microgrids currently under development outside of Maryland include Consolidated Edison's Brooklyn-Queens

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<sup>118</sup> See, e.g., WGL Energy Comments at 7; Direct Energy Comments at 10; NEMA Comments at 1; AOBA Comments at 4.

<sup>119</sup> In Case No. 9416, we declined to address the legality of BGE's request to develop, own, and operate two public purpose microgrids pursuant to § 7-510(c)(6), finding instead that the company's proposal was deficient in other key aspects.

microgrid in New York, which combines solar PV with battery storage and fuel cell technologies to allow an apartment complex to self-consume all energy generated on-site without exporting to the grid;<sup>120</sup> Commonwealth Edison’s microgrid cluster in Chicago, which connects a utility-scale microgrid—capable of directly serving 1,060 residential, commercial, and small industrial customers in the Bronzeville area of Chicago—to a campus-style microgrid already in operation at a nearby technical college, thereby forming a “cluster” of microgrids;<sup>121</sup> and a “town center microgrid” in Montclair, New Jersey, which incorporates multiple DER, including solar PV and CHP to offset utility power and provide a cost savings revenue stream.<sup>122</sup> We are not aware of any public purpose microgrids currently in operation elsewhere in the country. Thus, there is opportunity for Maryland to emerge as a leader in this area. For the reasons stated herein, however, we find the Proposal is not in the public interest with regard to cost recovery and ratepayer impacts, cost-effectiveness, and our pilot study guidelines. Accordingly, we deny the Proposal, as filed, without prejudice. The Commission is desirous of developing public purpose microgrids within the State. Although having satisfied Condition No. 13, we nevertheless encourage Pepco to submit a different proposal for two pilot public purpose microgrid projects.

**IT IS THEREFORE** this 17<sup>th</sup> day of September, in the year Two Thousand and

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<sup>120</sup> Clean Technica, *Award-Winning Microgrid in Brooklyn “REvolutionizes” the Electricity Market* (Aug. 30, 2017), available at <https://cleantechnica.com/2017/08/30/award-winning-microgrid-in-brooklyn-revolutionizes-the-electricity-market/> (last visited July 5, 2018).

<sup>121</sup> Microgrid Knowledge, *Special Alert: ComEd Wins Approval for Innovative Microgrid Cluster in Chicago* (Mar. 1, 2018), available at <https://microgridknowledge.com/microgrid-cluster-chicago-approved/> (last visited July 30, 2018).

<sup>122</sup> Microgrid Knowledge, *Lucky Nine for Public Purpose Microgrid in Montclair, New Jersey* (July 25, 2017), available at <https://microgridknowledge.com/public-purpose-microgrid-montclair/> (last visited July 17, 2018).

Eighteen, by the Public Service Commission of Maryland,

**ORDERED:** (1) That Potomac Electric Power Company's September 25, 2017 Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids in Prince George's County and Montgomery County, Maryland, as supplemented on February 15, 2018, is hereby denied in its entirety and without prejudice to Pepco's ability to resubmit a pilot project proposal to deploy two public purpose microgrids in Maryland, consistent with Condition No. 13 of Order No. 86990; and

(2) That all motions not expressly granted herein are denied.

*/s/ Michael T. Richard*

*/s/ Anthony J. O'Donnell*

*/s/ Odogwu Obi Linton*

*/s/ Mindy L. Herman*

Commissioners\*

\* Chairman Jason M. Stanek was appointed to the Maryland Public Service Commission on July 1, 2018, and consequently did not participate in the Commission's decision concerning Potomac Electric Power Company's Proposal for a Pilot Program to Create and Evaluate Public Purpose Microgrids in Prince George's County and Montgomery County, Maryland.