

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA
1325 G STREET, NW, SUITE 800
WASHINGTON, DC 20005

ORDER

June 30, 2022

FORMAL CASE NO. 1163, IN THE MATTER OF THE INVESTIGATION INTO THE REGULATORY FRAMEWORK OF MICROGRIDS IN THE DISTRICT OF COLUMBIA, Order No. 21172

I. INTRODUCTION

1. By this Order, the Public Service Commission of the District of Columbia (“Commission”) identifies microgrid classifications and addresses legal issues involving the Commission’s regulatory authority over microgrids, and directs the Potomac Electric Power Company (“Pepco”) to propose modifications to the current Standby Service (Schedule S) to accommodate a distributed energy resources (“DER”) focus on microgrids within thirty (30) days of the date of this Order.

II. BACKGROUND

2. On January 24, 2020, the Commission opened *Formal Case No. 1163* to further investigate microgrid ownership and operation structures, business models and value propositions, benefits and costs of microgrids, and the different microgrid variances, which lead to appropriate microgrid classifications and regulatory treatments, after determining that the Commission has the authority to regulate microgrids if we determined they are acting within the definition of a public utility.¹

3. On July 31, 2020, the Commission issued a Notice of Inquiry (“NOI”) to solicit public comments regarding the Commission’s role in the regulatory framework of microgrids in the District of Columbia (“District”).² On August 31, 2020, the Office of the People’s Counsel for the District of Columbia (“OPC”), Dr. James Freihaut, on behalf of the Pennsylvania State University Department of Energy and Mineral Engineering, Shalom Flank, Ph.D., Pepco, Grid2.0, D.C. Consumer Utility Board and General Microgrids, collectively, the Grid2.0 Working Group (“Grid2.0”), and the District Department of Energy and Environment (“DOEE”) filed comments.³

¹ *Formal Case No. 1130*, Order No. 20286, ¶ 60, rel. January 24, 2020.

² *Formal Case No. 1163, In the Matter of the Investigation into the Regulatory Framework of Microgrids in the District of Columbia*, Notice of Inquiry, 67 DCR 9289-9294 (July 31, 2020).

³ *Formal Case No. 1163*, the Office of the People’s Counsel for the District of Columbia’s Initial Comments, filed August 31, 2020; *Formal Case No. 1163*, Comments of Dr. James Freihaut, Pennsylvania State University Department of Energy and Mineral Engineering, filed August 31, 2020; *Formal Case No. 1163*, Comments of Potomac Electric Power Company, filed August 31, 2020; *Formal Case No. 1163*, Grid2.0’s Comments in Response

On September 1, 2020, the Sierra Club filed comments.⁴ On September 2, 2020, William Sherman, on behalf of Combined Heat and Power Alliance, filed comments.⁵ On September 15, 2020, OPC, Pepco, Grid.2.0, and DOEE filed reply comments.⁶

III. DISCUSSION

4. As the NOI states, the Microgrid Working Group established in our DC PowerPath proceeding was initially tasked to address microgrid development in the District by examining the benefits and costs of microgrids and providing recommendations addressing, among other things, microgrid ownership, operation, standards, and regulations.⁷ The Microgrid Working Group presented recommendations, some of which were listed in the NOI. The Commission appreciates the public comments that provide important information to assist the Commission in developing the District's microgrid regulations.

5. In this Order, we identify certain microgrid classifications that exist, recognizing that there may be additions and modifications to the classifications as technology and business models evolve. Additionally, this Order addresses legal issues that pertain to the Commission's regulatory authority over microgrids. Given microgrids' role in providing grid resilience and resource adequacy, we believe that clarity and certainty are essential to ensure that the District of Columbia meets the goals established in the *Clean Energy DC* plan and the *Resilient DC* strategy.⁸ Although microgrids can provide resiliency benefits and may supply energy at a lower per-unit cost given particular underlying efficiencies, microgrid adoption and investment may be hampered, in part, because of an uncertain regulatory environment. The regulatory provisions that are being proposed in a separate Notice of Proposed Rulemaking ("NOPR") to support our determinations in this Order should provide clarity and certainty for microgrid development participants.

to the Public Service Commission's Notice of Inquiry, filed August 31, 2020; *Formal Case No. 1163*, the Department of Energy and Environment's Initial Comments in Response to the Notice of Inquiry, filed August 31, 2020.

⁴ *Formal Case No. 1163*, Sierra Club Comments in Response to the Notice of Inquiry, filed September 1, 2020.

⁵ *Formal Case No. 1163*, Comments of William Sherman, on behalf of Combined Heat and Power Alliance, filed September 2, 2020.

⁶ *Formal Case No. 1163*, The Office of the People's Counsel for the District of Columbia's Reply Comments, filed September 15, 2020; *Formal Case No. 1163*, Reply Comments of Potomac Electric Power Company, filed September 15, 2020; *Formal Case No. 1163*, Grid2.0's Reply Comments in Response to the Public Service Commission's Notice of Inquiry, filed September 15, 2020, the Department of Energy and Environment's Reply Comments in Response to the Notice of Inquiry, filed September 15, 2020.

⁷ *Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability*, Order No. 19432, ¶ 6, rel. August 9, 2018

⁸ Department of Energy & Environment, *Clean Energy DC: The District of Columbia Climate and Energy Action Plan*, rel. August 2018, available at <https://doee.dc.gov/cleanenergydc> ("Clean Energy DC"); *Resilient DC, Resilient DC: A Strategy to Thrive in the Face of Change*, available at <https://resilient.dc.gov/>.

A. Microgrid Definition and Classifications

6. The Commission has defined the term “microgrid” to mean:

“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.”⁹

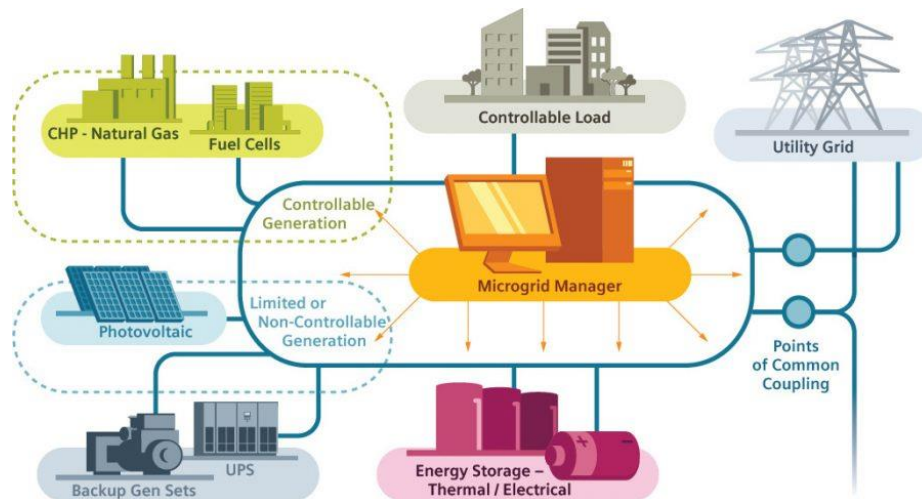
This definition establishes that: (1) it is possible to identify the part of the electric distribution system comprising a microgrid as distinct from the rest of the system; (2) the resources connected to a microgrid are controlled in concert with each other rather than with distant resources; and (3) the microgrid can function regardless of whether it is connected to the larger electric distribution system or not. This definition does not limit the size of the DER or the technologies that can or should be used because these can vary with each microgrid based on the needs of those served by the microgrid.¹⁰

7. A microgrid system deploys an integrated package of DERs, including cogeneration and renewable energy, to provide electricity and may provide other forms of energy to either a single or multiple customers connected through a network (see below graphic). The microgrid is interconnected with the public utility’s distribution system through a single point of common coupling, may operate in parallel with that system, and, with advanced applications, is capable of automatically and instantaneously responding to stimuli from the electric distribution system to either disconnect or provide support during grid disturbances. The microgrid may be required to operate in island mode under certain conditions to maintain the reliable and safe operation of the electric distribution system. Generation and demand on a microgrid are integrated in a manner that allows customers to shed or otherwise manage loads in such a way as to optimize the performance, cost, and reliability of the microgrid system during grid disturbances.¹¹ Consequently, microgrids can enhance energy resilience by ensuring that loads have access to electricity at times when the primary source of energy has been lost. Under normal conditions, the microgrid may draw some or all of its power from the electric distribution system.

⁹ 15 DCMR § 4099 (2022).

¹⁰ The Commission has defined distributed energy resources (“DER”) to mean “a resource sited close to the customer’s load that can provide all or some of the customer’s energy needs, can also be used by the system to either reduce demand (such as demand response) or increase supply to satisfy the energy, capacity, and/or ancillary service needs of the distribution or transmission system. Types of DERs include, but are not limited to: photovoltaic solar, wind, cogeneration, energy storage, demand response, electric vehicles, microturbines, biomass, waste-to-energy, generating facilities, and energy efficiency.” (See 15 DCMR § 999).

¹¹ Kueck, J. D., R. H. Staunton, et al. (2003). Microgrid Energy Management System. Oak Ridge, TN, Consortium for Electric Reliability Solutions, available at <https://eta-publications.lbl.gov/sites/default/files/microgrid-energy-management-system.pdf>.



Source: Center for Climate and Energy Solutions, <https://www.c2es.org/content/microgrids/>

8. **Microgrid Classifications.** While there are different microgrid DER ownership models, the focus here, when considering the Commission’s regulatory authority over microgrids, begins with the classification of the microgrid system. We note that the New Jersey Board of Public Utilities has developed a microgrid classification system based on the number of customers served by the microgrid.¹² We identify and describe them below.

9. **Single customer microgrids** could have an integrated system of DERs such as a photovoltaic solar (“PV”) system, combined heat and power (“CHP”), or fuel cell system that is serving one customer behind a single utility meter. This microgrid class is connected to and can island from the electric distribution system to serve some or all of the single customer’s existing load. An example of a single customer microgrid serves a single building load such as a hospital, office building, restaurant, school, or multifamily housing building (*e.g.*, apartment or real estate cooperative).

10. **Single customer-campus microgrids** could have an integrated system of DERs serving multiple facilities, served by one meter at the point of common coupling (“PCC”). These single customer-campus microgrids are connected to and can island from the electric distribution system to serve some or all of the single customer-campus’s existing load. An example of a single customer-campus microgrid is one where an integrated system of DERs serves a campus setting such as a college or a university, a healthcare/hospital campus, or a military base.

11. **Multiple customer microgrids** have an integrated system of DERs serving end-use retail customers on multiple microgrid-owned meters. Although the multiple customer microgrid has one PCC with a single electric company meter, the individual facilities/customers within this microgrid are ultimately connected to the electric distribution system and through the same microgrid PCC. A microgrid that connects multiple end-use retail customers located in

¹² State of New Jersey Board of Public Utilities, “Microgrid,” available at <https://www.state.nj.us/bpu/about/divisions/opp/microgrid.html>.

multiple buildings equipped with microgrid-owned meters is an example of a multiple customer microgrid.

B. Commission’s Regulatory Authority Over Microgrids

12. There are two legal issues pertaining to the Commission’s regulatory authority over microgrids. First, whether a microgrid is deemed to be an electric company and is therefore subject to regulation by the Commission as a public utility. Second, even if a microgrid is exempt from regulation by the Commission as a public utility, whether a microgrid is deemed to be an electric generating facility and/or an electricity supplier, and therefore is subject to Commission regulations governing the generation sale, and distribution of electricity. The Commission addresses each issue below.

13. **Whether a Microgrid is an Electric Company.** D.C. Code § 34-214 defines a “public utility,” in pertinent part, as “every ... gas plant, gas company, electric company, telephone corporation, ... and pipeline company.”¹³ The Commission has general supervision over natural gas and electric companies in the District of Columbia under D.C. Code § 34-301. It also has jurisdiction to regulate “public utilities” in many instances.¹⁴ 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.” The term “electric company” does not include “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. The term also excludes a person or entity that does not sell or distribute electricity and that owns or operates equipment used exclusively for the charging of electric vehicles.”¹⁵

14. Considering the microgrid classifications we identify in this Order, neither a single customer microgrid nor a single customer-campus setting microgrid is deemed an electric company as defined by D.C. Code § 34-207. These microgrids provide electricity to a single customer that owns or manages a microgrid system that serves the needs of itself, its tenants, or its real estate co-op members, thus falling within the exemption from the definition of an electric company. Therefore, a single customer microgrid and a single customer-campus microgrid that owns, leases, or manages the internal distribution system serving the building and that supplies

¹³ D.C. Code § 34-214 defines a “public utility” as “every street railroad, street railroad corporation, common carrier, gas plant, gas company, electric company, telephone corporation, telephone line, telegraph corporation, telegraph line, and pipeline company. Until the initial implementation date of Chapter 15 of this title, the term shall also include every electric generating facility owned and operated by the electric company. The term “public utility” excludes a person or entity that owns or operates electric vehicle supply equipment but does not sell or distribute electricity, an electric vehicle charging station service company, or an electric vehicle charging station service provider.”

¹⁴ See, e.g., D.C. Code § 34-401 (investigation of accidents); § 34-402 (enforcement of all laws relating to public utilities); § 34-502 (issuance of securities); and § 34-901 (regulation of public utility rates).

¹⁵ D.C. Code § 34-207. D.C. Code § 34-1501(12) defines a “customer” as “purchaser of electricity for end use in the District of Columbia.”

electricity and other related electricity services solely for use by the building occupants are not deemed to be an electric company, and are, therefore, not regulated by the Commission.

15. Because a multiple customer microgrid transmits and distributes electricity to multiple end-use retail customers and multiple buildings with individual microgrid-owned meters that may or may not be located on the same site as the microgrid, it is an electric company as defined by D.C. Code § 34-207. Like an electric company, a multiple customer microgrid is a public utility as defined by D.C. Code § 34-214 and is required to apply for a certificate of present and future public convenience and necessity under D.C. Code § 34-1101(b), and is subject to the provisions of Title 34 of the D.C. Code applicable to a public utility, including, but not be limited to, provisions on OPC's authority and the assessment of public utilities.¹⁶ Additionally, a multiple customer microgrid would be subject to the provisions of Title 15 of the D.C. Municipal Regulations (“DCMR”) applicable to a public utility, electric company, and an electric utility, including the electric quality of service standards outlined in 15 DCMR § 3600, *et seq.*

16. **Whether a Microgrid is an Electric Generating Facility.** D.C. Code § 34-205 defines an “electric generating facility” to be

“all buildings, easements, real estate, mains, pipes, conduits, fixtures, meters, wires, poles, lamps, devices, and materials of any kind operated, owned, used, or to be used by a person for the generation of electricity. The term includes all buildings, easements, real estate, mains, pipes, conduits, fixtures, meters, wires, poles, lamps, devices, and materials of any kind operated, owned, used, or to be used by a person for cogeneration of electricity.”¹⁷

Thus a microgrid that is used to generate electricity is an Electric Generating Facility. If a microgrid is used to generate electricity that is being sold, the microgrid is subject to D.C. Code § 34-1516¹⁸ and the provisions of Title 15 of the DCMR applicable to electric generating facilities that sell electricity.¹⁹

17. **Whether a Microgrid is an Electricity Supplier.** D.C. Code § 34-1501(17) defines an “electricity supplier” to be a person, including an aggregator, broker, or marketer, who generates electricity; sells electricity; or purchases, brokers, arranges or, markets electricity for sale to customers. The term “electricity supplier” does not include:

¹⁶ See D.C. Code § 34-804; D.C. Code § 34-912.

¹⁷ D.C. Code § 34-205.

¹⁸ D.C. Code § 34-1516 states, “No person shall construct an electric generating facility for the purpose of the retail or wholesale sale of electricity unless the Commission first determines, after notice and a hearing, that the construction of the electric generating facility is in the public interest.”

¹⁹ See, e.g., 15 DCMR § 2100.2, which requires the Commission to determine that the construction of the electric generating facility is in the public interest.

“building owners, lessees, or managers who manage the internal distribution system serving such building and who supply electricity solely to occupants of the building for use by the occupants; any person who purchases electricity for its own use or for the use of its subsidiaries or affiliates; or any apartment building or office building manager who aggregates electric service requirements for his or her building or buildings, and who does not: take title to electricity; market electric services to the individually-metered tenants of his or her building; or engage in the resale of electric services to others; property owners who supply small amounts of power, at cost, as an accommodation to lessors or licensees of the property; and a consolidator.”²⁰

18. Considering the microgrid classifications we have identified in this Order, neither a single customer microgrid nor a single customer-campus microgrid is deemed an electricity supplier as defined by D.C. Code § 34-1501(17). These microgrids provide electricity to a single customer that owns or manages a microgrid system that serves the needs of itself or its tenants, thus falling within the exemption from this definition. Therefore, single customer microgrids and single customer-campus microgrids are not electricity suppliers. However, a multiple customer microgrid that sells electricity, or purchases, brokers, arranges, or markets electricity for sale to end-user retail customers is an electricity supplier and is subject to the provisions of Title 34 of the D.C. Code applicable to electricity suppliers to include the assessment of electricity suppliers,²¹ and the provisions of Title 15 of the DCMR applicable to electricity suppliers.²²

19. The Commission intends to publish a NOPR based on the microgrid classifications and the legal authority discussed in this Order. We look forward to receiving public comments to provide clarity and facilitate microgrid development in the District. The Commission plans to consider establishing a tariff structure to enable a microgrid to receive reasonable compensation for its value in resiliency, power quality, islanding, grid reliability, and other ancillary services for the electric distribution system. The Commission directs Pepco to provide the Commission with proposed modifications to the Standby Service (Schedule S) in its tariff, which can facilitate the development of microgrids within thirty (30) days from the date of this Order. The current Standby Service (Schedule S) should be updated to accommodate a DER focus on microgrids.

²⁰ D.C. Code § 34-1501(17).

²¹ See D.C. Code § 34-912.

²² See 15 D.C.M.R. § 300, *et seq.*, 15 D.C.M.R. § 2900, *et seq.*, 15 D.C.M.R. § 3600, *et seq.*, and 15 D.C.M.R. § 4600, *et seq.*

THEREFORE, IT IS ORDERED THAT:

20. The microgrid classifications outlined in this Order are identified; and

21. The Potomac Electric Power Company is **DIRECTED** to propose modifications to the current Standby Service (Schedule S) to accommodate a distributed energy resource focus on microgrids.

A TRUE COPY:

BY DIRECTION OF THE COMMISSION:

A handwritten signature in black ink, reading "Brinda Westbrook-Sedgwick". The signature is written in a cursive, flowing style.

CHIEF CLERK:

**BRINDA WESTBROOK-SEDGWICK
COMMISSION SECRETARY**