

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA**NOTICE OF PROPOSED RULEMAKING****RM-48-2022-01, IN THE MATTER OF 15 DCMR CHAPTER 48 — MICROGRID**

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,¹ of the adoption of a new Chapter 48 (District of Columbia Microgrid Regulations) of Title 15 (Public Utilities and Cable Television) of the District Code of Municipal Regulations (DCMR) in not less than thirty (30) days from the date of publication of this Notice of Proposed Rulemaking (NOPR) in the *District of Columbia Register*. Chapter 48 is a new chapter that establishes rules governing microgrids in the District of Columbia.

A new Chapter 48 is proposed as follows:

CHAPTER 48 DISTRICT OF COLUMBIA MICROGRID REGULATIONS

Section

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¹ D.C. Code § 34-802 (2022); D.C. Code § 2-505 (2022).

4800 APPLICABILITY

4800.1 **Application.** This chapter shall establish the regulatory authority of the Public Service Commission of the District of Columbia over Microgrids. This chapter provides the classifications, requirements, codes, and standards for Microgrids.

Purpose. This chapter provides rules governing microgrid development and deployment in the District of Columbia, which can improve customer reliability, reduce the risk of power outages at critical facilities, lower carbon emissions, and spur economic development while integrating innovative technology into the local energy market. This chapter shall not apply to Microgrids owned and/or operated by the Electric Distribution Company.

4801 MICROGRID CLASSIFICATION AND REGULATORY REQUIREMENTS

4801.1 Microgrids are interconnected loads, generation assets, and advanced control equipment installed across a limited geographic area and within a defined electrical boundary 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 either Grid-Connected Mode or Island Mode and shall be classified as one of the following:

- (a) Multiple Customer Microgrid, which is a Microgrid that has a single distributed energy resource (DER) or multiple DERs serving multiple customers on multiple meters that may have their connections to the Electric Distribution System and the Microgrid through a Point of Common Coupling;
- (b) Single Customer Microgrid, which is a single DER or multiple DERs that serve one customer behind a single meter; or
- (c) Single Customer-Campus Microgrid is a single DER or multiple DERs serving multiple facilities controlled by one meter at the Point of Common Coupling.

4801.2 A Single Customer Microgrid and a Single Customer-Campus Microgrid shall not be subject to any regulatory requirements, except as stated in Sections 4802 and 4803.

4801.3 A Multiple Customer Microgrid shall be subject to Sections 4803 and 4806.

4801.4 Microgrids owned or developed by the Electric Distribution Company are not subject to this chapter. The Electric Distribution Company shall file a request with the Commission if it proposes to own or develop a Microgrid.

4802 ELECTRIC SERVICE PROVIDED BY MICROGRID

4802.1 Single Customer Microgrids and Single Customer-Campus Microgrids may provide Electric Service to building occupants but shall not sell or distribute excess Electric Service to other Persons.

4803 MICROGRID TECHNICAL REQUIREMENTS

4803.1 A Microgrid includes sufficient physical assets and distribution technologies that provide a suitable level of service that is safe and reliable, including automation technologies, sensors, power conditioning equipment, and other equipment suitable for voltage and/or frequency regulation, control systems, revenue-grade generation metering, and communication systems. Microgrids may include DERs such as CHP, solar, energy storage, and microturbines.

4803.2 The Microgrid Operator shall communicate with the Electric Distribution Company regarding the Microgrid's ability to operate in Island Mode as provided in the Microgrid Interconnection Agreement between the Microgrid Operator and the Electric Distribution Company. The Microgrid Interconnection Agreement shall set forth (a) the advance notice requirements before beginning to operate in non-emergency Island Mode, (b) the procedures for operating in emergency Island Mode, and (c) that when the Microgrid Operator detects that the Microgrid is operating in an unintentional Island Mode, it shall cease to energize the Electric Distribution Company under the IEEE 1547-2018 standard requirements.

4803.3 The Microgrid Operator shall be required to have communication and control systems that meet the requirements established by the Electric Distribution Company, including cybersecurity, as specified in the Microgrid Interconnection Agreement.

4803.4 The Microgrids shall be designed and equipped with appropriate protective and control functions that will prevent any DER in the Microgrid system from being connected to a de-energized circuit in the Electric Distribution Company. The protection and control system shall be required to meet all applicable requirements of the most current standards specified in section 4804 and operate under the IEEE 1547-2018 standard requirements.

4803.5 The Microgrid Operator and the Electric Distribution Company shall address Microgrid operation under abnormal conditions, including but not limited to unintentional islanding, loss of synchronism, abnormal conditions of voltage, power flow, or frequency at the Point of Common Coupling, or in any section of the Microgrid or the surrounding of the utility in the Microgrid Interconnection Agreement.

4803.6 Microgrids shall maintain monthly records of fuel consumption and submit an annual fuel consumption report with the Commission on March 31 for each year the Microgrid operates. Each year after the Microgrid first produces electric

energy, the Microgrids shall submit an annual operational report detailing fuel usage and demonstrating compliance with Section 4803.

4804 CODES AND STANDARDS

4804.1 Microgrids shall comply with all applicable codes and standards the Commission identifies, including but not limited to the District of Columbia Renewable Portfolio Standard. The Commission may, from time to time, review and, when necessary, modify and update the codes and standards that shall apply to Microgrids.

4804.2 The Microgrid shall be required to meet all applicable requirements of the most current standards, including but not limited to the National Electrical Safety Code, National Electric Code, the Environmental Protection Agency, the Occupational Safety and Health Administration, and all applicable District of Columbia codes and standards. The Microgrid Operator shall ensure the safety and reliability of microgrid distribution feeders and must comply with all applicable industry codes and standards.

4804.3 The Microgrid shall be required to meet permitting requirements established by the District of Columbia, including but not limited to electrical construction and air quality.

4805 INTERCONNECTIONS WITH THE ELECTRIC DISTRIBUTION SYSTEM

4805.1 Microgrids may interconnect with the Electric Distribution System under applicable regulations, including 15 D.C.M.R. § 4000 *et seq.*

4805.2 When in Grid-Connected mode, the DER units interconnected within the Microgrid shall comply with the requirements of the IEEE 1547-2018 standard and with the Microgrid Interconnection Agreement.

4805.3 The Electric Distribution Company shall provide a tariff approved by the Commission for the Microgrid that includes rate schedules to cover standby or full service, as appropriate.

4806 REQUIREMENTS FOR MULTIPLE CUSTOMER MICROGRIDS

4806.1 A Microgrid Operator overseeing the operation of a Multiple Customer Microgrid or a group of Multiple Customer Microgrids shall be considered an Electric Distribution Company and shall comply with all rules, regulations, standards, and orders applicable to an Electric Distribution Company, as defined by D.C. § 34-207. A Multiple Customer Microgrid shall not furnish Electric Service to Customers without being issued a certificate of present and future public convenience and necessity from the Commission pursuant to D.C. Code § 34-1101.

4806.2 After a certificate of present and future public convenience and necessity has been issued by the Commission, a Multiple Customer Microgrid may sell Electric Services to Customers that are connected to the Microgrid subject to the nondiscrimination requirements in Section 4806.8.

4806.3 **Registration.** Any Person who intends to own and/or operate a Multiple Customer Microgrid shall apply for registration as described in Section 4807. The application shall provide the following:

(A) Applicant Information.

1. Name of Microgrid Owner
2. Mailing address
3. Email address
4. Phone number

(B) The name and contact information of the Person (as required by Section 4806.3(1)-(4)) that will serve as Microgrid Operator if different from that of the Microgrid Owner.

(C) Operational Structure. The application shall identify the proposed Microgrid as a Multiple Customer Microgrid.

(D) Location. The application shall identify the physical location and provide a map showing the geographical boundaries of the proposed Microgrid.

(E) The number of Microgrid Customers. The application shall include a total expected number of Customers to be served by the Microgrid.

(F) Codes and Standards Compliance. The application shall demonstrate compliance with all requirements outlined in Section 4803.

(G) System Resources. The application shall list the planned sizes and types of assets (including generation, energy storage, inverters, and other electrical equipment, as applicable) to be added or connected to the Multiple Customer Microgrid.

(H) Equipment Vendor. The application shall include the name and contact information of the primary vendor(s) or the installer(s) of the Multiple Customer Microgrid.

- (I) **Certification of Design.** Before construction, the application shall include a certificate of the Multiple Customer Microgrid designed signed and stamped by a licensed engineer.
- (J) **Reliability Performance Standards.** The application shall attest that the Microgrid will comply with the electric quality of service standards outlined in 15 D.C.M.R. §3600, *et seq.*
- (K) **Utility Consumer Bill of Rights.** The application shall attest that the Microgrid will comply with the Utility Consumer Bill of Rights in 15 D.C.M.R. §300, *et seq.*
- (L) **Sample Documents.** The application shall include the following documents:
 - (1) A contract or agreement for Commission review and approval, per Section 4806.7.
 - (2) A sample bill for Commission review and approval.
 - (3) Any prospective changes to the contract or agreement or the sample bill submitted shall be submitted for Commission review and approval within 90 days of implementation.
- (M) **Billing Model.** Multiple Customer Microgrids shall bill Customers on a per-kWh basis. If a Multiple Customer Microgrid is unable to bill on a per-kWh basis, the Microgrid Owner or Microgrid Operator may request authorization from the Commission for an alternative payment structure. Such request shall explain why using a per-kWh billing method is preferable, as well as the preferred alternative payment structure and the calculations supporting that structure, as described in Section 4806.4.

4806.4 Multiple Customer Microgrid Operators shall charge uniform Electric Service rates across all Customers of the same Customer class. Charges within a Customer class shall be non-discriminatory and may be structured to include energy charges varying by usage clock, time of use, season, and system load. In addition, Multiple Customer Microgrid Operators shall recover from all Customers the assessment imposed on an Electric Company calculated on sales on a per-kilowatt-hour basis for the Energy Assistance Trust Fund (per D.C. Code § 8-1774.11) and the Sustainable Energy Trust Fund (per D.C. Code § 8-1774.10), and any other taxes and charges imposed on an Electric Company under District of Columbia law.

- 4806.5 Electric Service rates shall be project-specific cost-based rates supported by documentation and computed as the expected annual costs divided by expected sales. The expected annual costs shall be calculated as follows:
- (a) The projected investment in the Microgrid system, net of tax credits, grants, or subsidies, multiplied by a carrying charge, which shall be the levelized payment at the cost of capital over the life of the system (in years), and
 - (b) The annual operating costs of the Microgrid system, including fuel, maintenance of generation equipment, regulatory charges, meter reading, and billing.
- 4806.6 Multiple Customer Microgrid Operators shall submit a proposed rate structure, and all supporting documentation, for Commission review and approval.
- 4806.7 **Standard Contract or Agreement.** Multiple Customer Microgrid Operators shall prepare a standard contract or agreement for all Customers. Rates charged may vary for each Customer class. The contract or agreement shall be written and include, but not be limited to:
- (1) The effective date of the contract or agreement
 - (2) The termination date of the contract or agreement
 - (3) The rates and charges for which the Customer shall be charged, including, but not limited to, late payment fees and reconnection fees
 - (4) The billing period for Electric Service
 - (5) The terms and conditions for the suspension or termination of service to the Customer, including the requirements for reconnection
 - (6) A provision permitting an existing Customer to transfer their rights and responsibilities under a Microgrid contract or agreement to a subsequent Customer
 - (7) Force majeure provisions
 - (8) Terms and conditions by which the Microgrid Operator may have the right to enter the Customer's premises
 - (9) Provisions prohibiting the theft of Electric Service
 - (10) The name and contact information to whom Customers can make inquiries and complaints

- (11) The procedure for addressing and resolving Customer complaints as outlined in 15 D.C.M.R. §300, *et seq.*
- (12) Provisions for the termination of the contract or agreement by the Customer or the Microgrid Operator
- (13) A provision that if the contract or agreement is assigned or transferred, the same terms and conditions shall apply, and
- (14) A provision that the contract or agreement shall be governed and construed under the laws and the jurisdiction of the District of Columbia.

4806.8

Non-Discrimination. Multiple Customer Microgrid Operators shall not discriminate against a Person in the immediate vicinity of a Multiple Customer Microgrid if the Person wishes to receive Electric Service from the Multiple Customer Microgrid.

- (1) To demonstrate that it has not engaged in discrimination, a Multiple Customer Microgrid Operator shall provide a map of the proposed Multiple Customer Microgrid boundaries showing the Customers to be interconnected to the Multiple Customer Microgrid.
- (2) The Commission, at its discretion, may review the maps and determine whether the proposed Microgrid boundaries constitute discrimination.
- (3) Multiple Customer Microgrid Operators may request reconsideration of a Commission determination of discrimination by demonstrating either of the following:
 - (a) Based on cost, it is not feasible to connect a Person with what has been excluded. The Multiple Customer Microgrid Operator shall submit a calculation showing that providing Electric Service to a Person would exceed the average cost of providing Electric Service to other Persons of the same Customer class such that the average rate charged to the excluded Person would not permit the Multiple Customer Microgrid Operator to recover its costs plus a reasonable return, if applicable.
 - (b) It is technically not feasible to connect the Person. The Multiple Customer Microgrid Operator shall submit an affidavit signed by a licensed engineer describing the technical barriers that prevent the delivery of Electric Service to the Person.

4806.9 **Length of Contract or Agreement.** The length of a contract or agreement shall be sufficient to allow the Multiple Customer Microgrid Operator to recover its costs plus a reasonable return.

4806.10 **Termination of Operation.** A Multiple Customer Microgrid Operator may terminate operation and/or remove Microgrid equipment upon receiving permission from the Commission.

4806.11 **Termination of Service.** The contract or agreement shall contain language describing how a Customer or a Multiple Customer Microgrid Operator can seek the termination of service.

4807 MICROGRID REGISTRATION APPLICATION

4807.1 **Registration Application Form.** Any Person seeking to operate a Microgrid shall complete and submit a registration application on the applicable form(s) provided by the Commission and be verified by oath or affirmation. The application shall be accompanied by a copy of the Microgrid Interconnection Agreement and an operational plan that describes the type of generation assets being used at the Microgrid and how they will be used to meet anticipated demands. After a Microgrid has been fully constructed, but before it begins operating, the Microgrid Operator shall file with the Commission copies of all the necessary permitting and approvals that must be obtained before operation begins.

4807.2 **Registration Application Fee.** Registration applications shall include a payment of a non-refundable filing fee of Five Hundred Dollars (\$500.00).

4807.3 **Commission Review.** The Commission shall review an application registration for completeness and compliance with this chapter and may require the Microgrid Operator to provide any additional information deemed necessary by the Commission.

4807.4 **Commission Determination.** The Commission shall issue a determination on a registration application within thirty days of receipt:

- (1) Granting the Microgrid status as a registered Microgrid, subject to the provisions of this chapter;
- (2) Requiring additional information and/or specific revisions; or
- (3) Denying Microgrid registration.

4807.5 **Obligation to Update.** If at any time before or after a Commission determination has been made pursuant to Section 4807.4, any information provided in the registration application changes or is expected to change, the Microgrid Operator and/or Microgrid Owner shall notify the Commission of such change no later than

seven days from the date the change takes effect or is expected to take effect. Failure to notify the Commission may result in issuing a Notice of Non-Compliance, pursuant to Section 4810.

4808 COMPLIANCE WITH OTHER APPLICABLE REQUIREMENTS

4808.1 A Microgrid Operator and Microgrid Owner shall comply with all applicable legal and regulatory requirements established and enforced by the Government of the District of Columbia as outlined in section 4804.3.

4809 PENALTIES FOR NON-COMPLIANCE

4809.1 The Commission may issue a Notice of Non-Compliance to any Person who fails to comply with the requirements of this chapter, and may, because of such non-compliance, and after notice and an opportunity to respond, have the Microgrid registration suspended or revoked, or subject the Microgrid to any other applicable penalty as determined to be appropriate by the Commission.

4809.2 If a Microgrid Operator and/or Microgrid Owner is non-compliant with the requirements of this chapter, or if the Commission determines that a Microgrid fails to comply with the provisions of this chapter, the Commission may, at its discretion, take any appropriate action necessary to ensure the safety and reliability of Electric Service provided to Microgrid Customers.

4810 WAIVER

4810.1 The Commission may, upon request, or on its initiative after notice to Persons of its intention to do so, waive any provision of this chapter for good cause.

4899 DEFINITIONS

4899.1 When used in this chapter, the following terms and phrases shall have the following meaning:

Combined Heat and Power – means equipment used to produce electric energy and forms of thermal energy (such as heat or steam) used for residential or commercial heating or cooling purposes through the integrated use of technology.

Commission – means the Public Service Commission of the District of Columbia.

Customer – means any Person who consumes Electric Services from a Multiple Customer Microgrid.

Demand Response – means a reduction or modification in the consumption of

electric energy by customers from their expected consumption in response to an increase in the price of electric energy or to incentive payments or behavioral signals designed to induce lower consumption of electric energy.

Distributed Energy Resources or DER – means resources sited close to the customer’s load that can provide all or some of the customer’s energy needs, it 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.

Electric Distribution Company or EDC – means every corporation, company, association, joint stock company or association, partnership, or Person doing business in the District of Columbia, their lessees, trustees, or receivers appointed by any court whatsoever, physically transmitting or distributing electricity in the District of Columbia to retail electric customers, excluding any person or entity distributing electricity from a behind-the-meter generator to a single retail customer behind the same meter and located on the same premise as the customer’s meter. In addition, 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 electricity-related services solely to the occupants of the building for use by the occupants.

Electric Distribution System or EDS – means the facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries from interchanges with higher voltage transmission networks that transport bulk power over longer distances. Electric Distribution System has the same meaning as the term Area EPS, as defined in IEEE Standard 1547-2018.

Electric Service – means the provision of electricity, ancillary services, demand response, and other services supporting the Electric Distribution System.

Energy Storage – means any resource located in a Microgrid that has the capability of receiving energy from the Electric Distribution System or any other generation resource for later injection of electricity back into the Electric Distribution System or to serve an end user.

Grid-Connected Mode – means a mode of operation when the Microgrid is interconnected to and operating in parallel with the Electric Distribution System, is not operating in Island Mode, and the Electric Distribution Company maintains operational coordination of the delivery of electric service to the Point of Common Coupling.

IEEE Standard 1547-2018 — refers to the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Standard 1547 (2018) “Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces,” as amended and supplemented at the time the Interconnection request is submitted.

Interconnection – means the connection of Distributed Energy Resources to the Electric Distribution System.

Island Mode – means a mode of operation when a Microgrid that normally operates in Grid-Connected Mode is disconnected from the Electric Distribution System at the Point of Common Coupling, and the Microgrid is generating or producing energy to provide electric service within the Microgrid under the operational coordination of the Microgrid Operator.

Microgrid – means 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 either Grid-Connected Mode or Island Mode.

Microgrid Customer – means any Person who consumes or uses electric power provided by a Microgrid, including 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.

Microgrid Operator – means the registered operator of a Microgrid, which shall be the primary Person responsible for operating the Microgrid, providing maintenance, delivering contracted services, and billing for Electric Service. The Microgrid Operator may be the Microgrid Owner.

Microgrid Owner – means the Person or Persons with a direct proprietary interest in a Microgrid that is separate and independent from the proprietary interest in the equipment used by the Microgrid to provide Energy Service. A Microgrid equipment vendor that leases or offers third-party financing options is not a Microgrid Owner, provided the vendor

does not provide Energy Service or does not act as a Microgrid Operator.

Multiple Customer Microgrid – means a Microgrid that has a single DER or multiple DERs serving multiple customers on multiple meters that may have their own individual connections to the Electric Distribution System and the Microgrid through a Point of Common Coupling.

Person – means every individual, corporation, company, association, joint stock company, firm, partnership, or other entity.

Point of Common Coupling – means the point where a Microgrid is electrically connected to the Electric Distribution System. Point of Common Coupling has the same meaning defined in IEEE Standard 1547-2018.

Single Customer Microgrid – means a single DER or multiple DERs that serve one customer behind a single meter.

Single Customer-Campus Microgrid – means a single DER or multiple DERs serving multiple facilities controlled by one meter at the Point of Common Coupling.

2. All persons interested in commenting on the subject matter of this proposed rulemaking action may submit written comments no later than thirty (30) days after publication of this notice in the *District of Columbia Register* with 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 at 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 psc-commissionsecretary@dc.gov.