Duke Energy Kentucky, Inc. 1262 Cox Road. Erlanger, KY 41018 KY.P.S.C. Electric No. 2 Fifth Revised Sheet No. 89 Cancels and Supersedes Fourth Revised Sheet No. 89 Page 1 of 8

RIDER NM

NET METERING RIDER

AVAILABILITY

Net Metering is available to eligible customer-generators in the Company's service territory, upon request, and on a first-come, first-served basis up to a cumulative capacity of 1% of the Company's single hour peak load in Kentucky during the previous year. If the cumulative generating capacity of net metering systems reaches one percent (1%) of the Company's single hour peak load during the previous year, upon Commission approval, the Company's obligation to offer net metering to a new customer-generator may be limited. An eligible customer-generator shall mean a retail electric customer of the Company with a generating facility that:

- (1) Generates electricity using solar energy, wind energy, biomass or biogas energy, or hydro energy;
- (2) Has a rated capacity of not greater than fortyfive (45) kilowatts;
- (3) Is located on the customer's premises;
- (4) Is owned and operated by the customer;
- (5) Is connected in parallel with the Company's electric distribution system; and
- (6) Has the primary purpose of supplying all or part of the customer's own electricity requirements.

At its sole discretion, the Company may provide Net Metering to other customer-generators not meeting all the conditions listed above on a case-by-case basis.

The term "Customer" hereinafter shall refer to any customer requesting or receiving Net Metering services under this tariff.

METERING

The Company shall provide net metering services, without any cost to the Customer for metering equipment, through a standard kilowatt-hour metering system capable of measuring the flow of electricity in two (2) directions. This provision does not relieve Customer of his or her responsibility to pay metering costs embedded in the utility's Commission-approved base rates.

The standard kilo-watt-hour metering system shall use one of the following methods, as determined solely by the Company:

- (1) A single standard kilowatt-hour meter capable of measuring the flow of electricity in two (2) directions and registering the net amount in one register.
- (2) A single standard kilowatt-hour meter capable of measuring the flow of electricity in two (2) directions and registering the amount of flow in each direction in two separate registers, one

CANCELLED

May 1, 2020

Issued by authority of an Order of the Kentucky Public Service Commission dated December 9, 2019 in Case No. 2019-00440. Issued: December 12, 2019 **KENTUCKY PUBLIC**

Effective: January 1, 2020 SERVICE COMMISSION Issued by Amy B. Spiller, President of Amy B. Spiller

KENTUCKYPUBLIC SERVICE COMMISSION

Gwen R. Pinson Executive Director

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METERING (Contd.)

measuring the flow of electricity from the Company to the Customer and the other measuring the flow of electricity from the Customer to the Company.

(3) If method (1) or (2) is not feasible, two standard kilowatt-hour meters may be used, one measuring the flow of electricity from the Company to the Customer and the other measuring the flow of electricity from the Customer to the Company.

In method (2) or (3), subtracting one register or meter reading from the other register or meter reading will yield the same result as if method (1) were used.

Any additional meter, meters, or distribution upgrades needed to monitor the flow in each direction shall be installed at the Customer's expense.

BILLING

The measurement of net electricity supplied by the Company and delivered to the Company shall be calculated in the following manner. The Company shall measure the difference between the amount of electricity delivered by the Company to the Customer and the amount of electricity generated by the Customer and delivered to the Company during the billing period, in accordance with one of the methods listed under "METERING". If the kWh delivered by the Company to the Customer exceeds the kWh delivered by the Customer to the Company during the billing period, the Customer shall be billed for the kWh difference. If the kWh generated by the Customer and delivered to the Company exceeds the kWh supplied by the Company to the Customer during the billing period, the Customer shall be credited in the next billing cycle for the kWh difference. Any unused credit when the Customer closes his account will be granted to the Company.

Bill charges and credits will be in accordance with the same standard tariff that would apply if the Customer were not a customer-generator. If time-of-use metering is used, the electricity fed back to the electric grid by the Customer shall be net-metered and accounted for at the specific time it is fed back to the electric grid in accordance with the time-of-use billing agreement currently in place.

Net metering credits are not transferable between customers or locations.

APPLICATION AND APPROVAL PROCESS

The Customer shall submit an Application for Interconnection and Net Metering ("Application") and receive approval from the Company prior to connecting the generator facility to the Company's system.

Applications will be submitted by the Customer and reviewed and processed by the Company according to either Level 1 or Level 2 processes defined below.

The Company may reject an Application for violations of any code, standard, or regulation related to reliability or safety; however, the Company will work with the Customer to resolve those issues to the extent practicable.

CANCELLED

May 1, 2020

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321. Issued: April 30, 2018 KENTUCKY PUBLIC

Issued: April 30, 2018

Effective: April 14, 2018 SERVICE COMMISSION Issued by James P. Henning, President isi James P. Henning 4/14/2018

PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

PUBLIC SERVICE COMMISSION Gwen R. Pinson

Executive Director

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APPLICATION AND APPROVAL PROCESS (Contd.)

Customers may contact the Company to check on status of an Application or with questions prior to submitting an Application. Company contact information can be found on the Application form.

Application forms along with instructions on how to submit an application are available on the Company's website.

LEVEL 1

A Level 1 Application shall be used if the generating facility is inverter based and is certified by a nationally recognized testing laboratory to meet the requirements of Underwriters Laboratories Standard 1741 "Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources" (UL 1741).

The Company will approve the Level 1 Application if the generating facility also meets all of the following conditions:

- (1) For interconnection to a radial distribution circuit, the aggregated generation on the circuit, including the proposed generating facility, will not exceed 15% of the Line Section's most recent annual one hour peak load. A line section is the smallest part of the primary distribution system the generating facility could remain connected to after operation of any sectionalizing devices.
- (2) If the proposed generating facility is to be interconnected on a single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed generating facility, will not exceed the smaller of 20 kVA or the nameplate rating of the transformer.
- (3) If the proposed generating facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
- (4) If the generating facility is to be connected to three-phase, three wire primary utility distribution lines, the generator shall appear as a phase-to-phase connection at the primary utility distribution line.
- (5) If the generating facility is to be connected to three-phase, four wire primary utility distribution lines, the generator shall appear to the primary utility distribution line as an effectively grounded source.

CANCELLED

May 1, 2020

KENTUCKY PUBLIC SERVICE COMMISSION

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321.

Issued: April 30, 2018 Effective: April 14, 2018

Issued by James P. Henning, President /s/ James P. Henning

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LEVEL 1 (Contd.)

- (6) The interconnection will not be on an area or spot network¹.
- (7) The Company does not identify any violations of any applicable provisions of IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems".
- (8) No construction of facilities by the Company on its own system will be required to accommodate the generating facility

If the generating facility does not meet all of the above listed criteria, the Company, in its sole discretion, may either: 1.) approve the generating facility under the Level 1 Application if the Company determines that the generating facility can be safely and reliably connected to the Company's system; or 2) deny the application as submitted under the Level 1 Application.

The Company shall notify the customer within 20 business days whether the application is approved or denied, based on the criteria provided in this section.

If the application lacks complete information, the Company shall notify the Customer that additional information is required, including a list of such additional information. The time between notification and receipt of required additional information will add to the time to process the application.

The Customer shall be notified whether the application is approved in writing. The approval will be conditioned upon successful completion of an initial installation inspection and witness test if required by the Company. The Company's written approval will indicate if an inspection and witness test are required. If an inspection and witness test are required, the Customer shall notify the Company within 3 business days of completion of the generating facility installation and schedule an inspection and witness test with the Company to occur within 10 business days of completion of the generator facility installation or as otherwise agreed to by the Company and the Customer. If an inspection and witness test is required, the Customer may not operate the generating facility (except for operational testing not to exceed two hours) until successful completion of such inspection and witness test. If the installation fails the inspection or witness test due to non-compliance with any provision in the Application and Company approval, the Customer shall not operate the generating facility until any and all non-compliance is corrected and re-inspected by the Company.

If the Application is denied, the Company will supply the Customer with reasons for denial. The Customer may resubmit under Level 2 if appropriate.

Area and spot networks are systems where multiple transformers are interconnected on the secondary side and multiple primary voltage circuits are used to feed the transformers. A spot network is typically used to serve a single building and the transformers are all in one location. An area network typically serves multiple customers with secondary conductors covering equipple could be conducted and with transformers at various locations.

PUBLIC SERVICE COMMISSION

CANCELLED

May 1, 2020

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321.

Issued: April 30, 2018

KENTUCKY PUBLIC

Effective: April 14, 2018 **SERVICE COMMISSION** Issued by James P. Henning, President is James P. Henning

PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

Gwen R. Pinson

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LEVEL 2

A Level 2 Application is required under any of the following:

- (1) The generating facility is not inverter based;
- (2) The generating facility uses equipment that is not certified by a nationally recognized testing laboratory to meet the requirements of UL 1741; or
- (3) The generating facility does not meet one or more of the additional conditions under Level 1.

The Company will approve the Level 2 application if the generating facility meets the Company's technical interconnection requirements, which are based on IEEE 1547. The Company's technical interconnection requirements are available on the Company's website or upon request.

The Company will process the Level 2 Application within 30 business days of receipt of a complete application. Within that time the Company will respond in one of the following ways:

- 1. The application is approved and the Company will provide the Customer with an Interconnection Agreement to sign.
- 2. If construction or other changes to the Company's distribution system are required, the cost will be the responsibility of the Customer. The Company will give notice to the Customer and offer to meet to discuss estimated costs and construction timeframe. Should Customer agree to pay for costs and proceed, Company will provide the Customer with an Interconnection Agreement to sign within a reasonable time.
- The application is denied. The Company will supply the Customer with reasons for denial and offer to meet to discuss possible changes that would result in Company approval. Customer may resubmit application with changes.

If application lacks complete information, Company shall notify Customer that additional information is required, including a list of such additional information. The time between notification and receipt of required additional information will add to the 30 business day target to process the application.

The Interconnection Agreement will contain all the terms and conditions for interconnection consistent with those specified in this tariff, inspection and witness test requirements, description of and cost of construction or other changes to the Company's distribution system required to accommodate the generating facility, and detailed documentation of the generating facilities which may include single line diagrams, relay settings, and description of operation.

Customer may not operate the generating facility until an Interconnection Agreement is signed by the Customer and Company and all necessary conditions stipulated in the agreement are met.

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May 1, 2020

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321.

Issued: April 30, 2018 Effective: April 14, 2018 SERVICE COMMISSION

Effective: April 14, 2014 SERVICE COMMISSION
Issued by James P. Herming, President is James P. Herming

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PUBLIC SERVICE COMMISSION

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APPLICATION, INSPECTION AND PROCESSING FEES

No application fees or other review, study, or inspection fees are charged by the Company for Level 1 or Level 2 applications.

TERMS AND CONDITIONS FOR INTERCONNECTION

To interconnect to the Company's distribution system, the Customer's generating facility shall comply with the following terms and conditions:

- The Company shall provide Customer net metering services, without charge for standard metering equipment, through a standard kilowatt-hour metering system capable of measuring the flow of electricity in two (2) directions. If the Customer requests any additional meter or meters or distribution upgrades are needed to monitor the flow in each direction, such installations shall be at the Customer's expense.
- 2. Customer shall install, operate, and maintain, at Customer's sole cost and expense, any control, protective, or other equipment on the Customer's system required by the Company's technical interconnection requirements based on IEEE 1547, the NEC, accredited testing laboratories such as Underwriters Laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the generating facility in parallel with Company's electric system. Customer shall bear full responsibility for the installation, maintenance and safe operation of the generating facility. Upon reasonable request from the Company, Customer shall demonstrate generating facility compliance.
- 3. The generating facility shall comply with, and Customer shall represent and warrant its compliance with: (a) any applicable safety and power quality standards established by IEEE and accredited testing laboratories such as Underwriters Laboratories; (b) the NEC as may be revised from time to time; (c) Company's rules, regulations, and Company's Service Regulations as contained in Company's Retail Electric Tariff as may be revised from time to time with the approval of the Kentucky Public Service Commission (Commission); (d) the rules and regulations of the Commission, as such rules and regulations may be revised from time to time by the Commission; and (e) all other applicable local, state, and federal codes and laws, as the same may be in effect from time to time. Where required by law, Customer shall pass an electrical inspection of the generating facility by a local authority having jurisdiction over the installation.
- 4. Any changes or additions to the Company's system required to accommodate the generating facility shall be considered excess facilities. Customer shall agree to pay Company for actual costs incurred for all such excess facilities prior to construction.
- 5. Customer shall operate the generating facility in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Company's electric system. At all times when the generating facility is being operated in parellel with Company's electric system, Customer shall so operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by Company to any of

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May 1, 2020

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321.

Issued: April 30, 2018 Effective: April 14, 2018 KENTUCKY PUBLIC

Issued by James P. Herming, President /s/ James P. Herming

Gwen R. Pinson Executive Director



PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

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TERMS AND CONDITIONS FOR INTERCONNECTION (Contd.)

its other customers or to any electric system interconnected with Company's electric system. Customer shall agree that the interconnection and operation of the generating facility is secondary to, and shall not interfere with, Company's ability to meet its primary responsibility of furnishing reasonably adequate service to its customers.

- 6. Customer shall be responsible for protecting, at Customer's sole cost and expense, the generating facility from any condition or disturbance on Company's electric system, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges, except that the Company shall be responsible for repair of damage caused to the generating facility resulting solely from the negligence or willful misconduct on the part of the Company.
- 7. After initial installation, Company shall have the right to inspect and/or witness commissioning tests, as specified in the Level 1 or Level 2 application and approval process. Following the initial testing and inspection of the generating facility and upon reasonable advance notice to Customer, Company shall have access at reasonable times to the generating facility to perform reasonable onsite inspections to verify that the installation, maintenance and operation of the generating facility comply with the requirements of this Tariff.
- 8. For inverter based systems that are certified by a nationally recognized testing laboratory to meet the requirements of UL 1741, the Company does not require a Customer owned external disconnect switch (EDS). For other generating facility types, an isolation device that satisfies the Company's technical interconnection requirements must be included. Where required by the Company, an eligible Customer shall furnish and install on Customer's side of the point of common coupling a safety disconnect switch which shall be capable of fully disconnecting the Customer's energy generating equipment from Company's electric service under the full rated conditions of the Customer's generating facility. The EDS shall be located adjacent to Company's meters or the location of the EDS shall be noted by placing a sticker on the meter, and shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the meter, the Customer shall be responsible for ensuring the location of the EDS is properly and legibly identified for so long as the generating facility is operational. The disconnect switch shall be accessible to Company personnel at all times.
- 9. Company shall have the right and authority at Company's sole discretion to isolate the generating facility or require the Customer to discontinue operation of the generating facility if Company believes that: (a) continued interconnection and parallel operation of the generating facility with Company's electric system creates or contributes (or may create or contribute) to a system emergency on either Company's or Customer's electric system; (b) the generating facility is not in compliance with the requirements of this Tariff, and the non-compliance adversely affects the safety, reliability or power quality of Company's electric system; or (c) the generating facility interieres with the operation of Company's electric system. In non-emergency situations, the property of the specific noncompliance condition.

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May 1, 2020

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321.

Issued: April 30, 2018

KENTUCKY PUBLIC

Effective: April 14, 2018 SERVICE COMMISSION
Issued by James P. Henning, President /s/ James P. Henning

4/14/2018 Punson

PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

Executive Director

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May 1, 2020

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TERMS AND CONDITIONS FOR INTERCONNECTION (Contd.)

and allow Customer a reasonable time to cure the noncompliance prior to isolating the Generating Facilities. In emergency situations, where the Company is unable to immediately isolate or cause the Customer to isolate only the generating facility, the Company may isolate the Customer's entire facility.

- 10. Customer shall agree that, without the prior written permission from Company, no changes shall be made to the generating facility as initially approved. Increases in generating facility capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and replacement of existing generating facility components with like components that meet UL 1741 certification requirements for Level 1 facilities and not resulting in increases in generating facility capacity is allowed without approval.
- 11. To the extent permitted by law, the Customer shall protect, indemnify and hold harmless the Company and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorneys fees, for or on account of any injury or death of persons or damage to property caused by the Customer or the Customer's employees, agents, representatives and contractors in tampering with, repairing, maintaining or operating the Customer's generating facility or any related equipment or any facilities owned by the Company except where such injury, death or damage was caused or contributed to by the fault or negligence of the Company or its employees, agents, representatives or contractors.

The liability of the Company to the Customer for injury to person and property shall be governed by the tariff(s) for the class of service under which the Customer is taking service.

- 12. The Customer shall maintain general liability insurance coverage (through a standard homeowner's, commercial or other policy) for both Level 1 and Level 2 generating facilities. Customer shall upon request provide Company with proof of such insurance at the time that application is made for net metering.
- 13. By entering into an Interconnection Agreement, or by inspection, if any, or by non-rejection, or by approval, or in any other way, Company does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.
- 14. A Customer's generating facility is transferable to other persons or service locations only after notification to the Company has been made and verification that the installation is in compliance with this tariff. Upon written notification that an approved generating facility is being transferred to another person, customer or location, the Company will verify that the installation is in compliance with this tariff and provide written notification to the customer(s) within 20 business days. If the installation is no longer in compliance with this tariff, the Company will notify the Customer in writing and list what must be done to place the facility in compliance.

15. The Customer shall retain any and all Renewable Energy Credits (RECs) that may be generated by their generating facility.

KENTUCKY Gwen R. Pinson **Executive Director**

Issued by authority of an Order of the Kentucky Public Service Commission dated April 13, 2018 in Case No. 2017-00321.

Issued: April 30, 2018 Effective: April 14, 2018

Issued by James P. Henning, President /s/ James P. Henning

4/14/2018

PURSUANT TO 807 KAR 5:011 SECTION 9 (1)