

KyPSC Case No. 2020-00302
TABLE OF CONTENTS

<u>DATA REQUEST</u>	<u>WITNESS</u>	<u>TAB NO.</u>
STAFF-DR-01-001	Nancy Connelly Bruce L. Sailors	1
STAFF-DR-01-002	Bruce L. Sailors	2
STAFF-DR-01-003	Nancy Connelly Erika Prado Bruce L. Sailors	3
STAFF-DR-01-004	Nancy Connelly Erika Prado	4
STAFF-DR-01-005	Bruce L. Sailors	5
STAFF-DR-01-006	Nancy Connelly	6
STAFF-DR-01-007	Nancy Connelly Erika Prado	7
STAFF-DR-01-008	Bruce L. Sailors	8
STAFF-DR-01-009	Dana. S. Adams Nancy Connelly	9

VERIFICATION

STATE OF NORTH CAROLINA)

) SS:

COUNTY OF LINCOLN)

The undersigned, Erika Prado, Manager Customer Care Operations, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of her knowledge, information, and belief.

Erika Prado, Affiant

t Erin M. Mulo

Subscribed and sworn to before me by Erika Prado on
this 14th day of July, 2026.

NOTARY PUBLIC

B. C.

My Commission Expires: 10-23-2030

BRIA CLARK
NOTARY PUBLIC
Lincoln County, North Carolina
My Commission Expires 10-23-2030

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Nancy Connelly, Lead Engineer, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the information contained therein is true and correct to the best of her knowledge, information, and belief.

Nancy Connelly
Nancy Connelly, Affiant

Subscribed and sworn to before me by Nancy Connelly on this 7th day of July, 2026.

Michael Casey Connelly
NOTARY PUBLIC

My Commission Expires: Never

MICHAEL CASEY CONNELLY, Attorney at Law
Notary Public, State of Ohio
My Commission Has No Expiration Date
Section 147.03

VERIFICATION

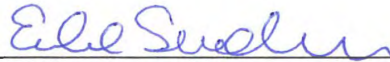
STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Bruce L. Sailers, Director Jurisdictional Rate Administration, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the information contained therein is true and correct to the best of his knowledge, information, and belief.



Bruce L. Sailers, Affiant

Subscribed and sworn to before me by Bruce L. Sailers on this 10th day of July, 2026.



NOTARY PUBLIC

My Commission Expires: July 8, 2027



EMILIE SUNDERMAN
Notary Public
State of Ohio
My Comm. Expires
July 8, 2027

Duke Energy Kentucky
Case No. 2020-00302
STAFF First Request for Information
Date Received: June 30, 2026

STAFF-DR-01-001

REQUEST:

Refer to Case No. 2008-00169, *Development of Guidelines for Interconnection and Net Metering for Certain Generators with Capacity up to Thirty Kilowatts* (Ky. PSC Jan. 8, 2009), Appendix A.

a. Provide red-lined tariff sheets for any updates or changes made to the utility's tariff regarding the interconnection and net-metering guidelines since the implementation of such guidelines in Case No. 2008-00169.

b. Provide any safety or engineering requirements currently required or available to net metering and interconnection customers to help ensure safety and reliability that are not required under the Commission's Interconnection and Net Metering Guidelines.

c. Provide the current percent of cumulative capacity of the utility's single hour peak load during calendar year 2025. Explain how the utility calculated this percentage.

d. Provide the case number where each change or update was approved.

RESPONSE:

a. Since the interconnection and net-metering guidelines approved in Case No. 2008-00169, there have been four revisions to the Company's net metering or interconnection tariff sheets. These revisions include changes approved in the following cases:

- Case No. 2017-00321: In this case, the only change to KYPSC Electric No. 2, Sheet No. 89, Rider NM, is an update to the Company president's name. No changes were made to net metering or the interconnection guidelines. At this time, the interconnection guidelines were included in the Rider NM tariff sheet. Please see STAFF-DR-01-001 Attachment 1.
- Case No. 2019-00440: Per the Commission's order in this case, the size limitation on generation systems for net metering eligibility was revised to 45 kW. At this time, the interconnection guidelines were included in the Rider NM tariff sheet. Please see STAFF-DR-01-001 Attachment 2.
- Case No. 2019-00271: In this case, no changes were made to the net metering or interconnection guidelines. The only changes are to the header and footer information. Please see STAFF-DR-01-001 Attachment 3.
- Case No. 2023-00413: In this case, KYPSC Electric No. 2, Sheet No. 83, Interconnection, and Sheet No. 84, Rider NM II, were created and therefore, the clean tariff sheets are provided since they are new. Please see STAFF-DR-01-001 Attachments 4 and 5, respectively. In addition, please see STAFF-DR-01-001 Attachment 6 for redline changes to Sheet No. 89, Rider NM I.
- Case No. 2025-00258: In this case, KYPSC Electric No. 2, Sheet No. 84, Rider NM II, is revised. Please see STAFF-DR-01-001 Attachment 7.

b. The requirements given in this responses can be found in the Company's Requirements for Electric Service and Meter Installations (Red Book). **For all paralleling generation, regardless of whether it is eligible for net metering,** a lockable, accessible

AC disconnect with visible open that, by manual mechanical operation, interrupts the flow of energy on the electrical conductors physically connected to the generation source is required. The disconnect shall be installed in a way that when operated allows for disconnect of utility-side voltage and islanding of the customer generation system. When properly installed, utility line-side work can safely take place while allowing the customer generation system to remain operational if equipped to do so. The disconnect shall be installed at the existing metering point or within sight of and not more than 50 feet from each other. The use of contactors, relays, inverters or other similar equipment to provide disconnection or isolation from utility voltage is not permitted. The AC disconnect options are:

- If customer system is generation only (PV or Wind), a single AC disconnect meeting all the above requirements may be installed.
- If customer system is generation and battery backup, a single AC disconnect shall be installed between the meter socket and customer load panel.

Duke Energy does not permit the interconnection of customer-owned generation inside of Company transformers, even if the existing service is metered at the transformer. Additionally, interconnections within current transformer (CT) cabinets or meter bases are not permitted. The interconnection must be made downstream from the transformer or CT cabinet, and/or meter base at customer-owned equipment.

The generation disconnect AND meter base must be properly labeled with an engraved, permanently attached placard denoting all electric power sources on the premise and the location of the generation disconnect.

In order to be approved for interconnection (NET metering), a meter base that is located at the interior of the home or building must be relocated, at the customer expense, to an accessible exterior location.

Meter base load side service lugs shall have only one wire installed on each factory installed lug; no double tapping of lugs unless connector is listed for double tapping.

A self-contained meter base shall not be modified in any way beyond what was intended as specified by the manufacturer, including the addition of blocks or connectors to increase capacity.

Only Company-provided devices may be installed between the Company electric meter and meter base. Customer-owned current transformers or other electrical metering devices shall not be installed inside the meter base.

Inverter based systems greater than or equal to 250 kW and less than 1 MW (this does not apply to net metering customers due to size): Small distributed generation interface (SDGI) consists of a utility-provided interface device and cabinet with pre-designed interconnection wiring to support the interface to the customer's facilities. The customer must provide voltage and current inputs to the utility device (for telemeter needs) and also "run permissive" control capability which can enable/disable their generator operation, from a single sourced-from-the-utility device.

Inverter-based systems greater than or equal to 1 MW and all rotating machine based generation (this does not apply to net metering customers due to size and type): Interconnection equipment will be owned and operated by Duke Energy at the interconnecting customer's cost. Duke Energy's protection equipment will include a recloser, relaying (control) and remote communications for monitoring and operations. The

remote communications for monitoring and control operations includes the relaying as well as the distributed generation interconnecting interface, which consists of a utility-provided interface device with pre-designed interconnection wiring to support the interface to the customer's facilities.

c. The Company understands this request to be seeking the percentage of the cumulative capacity that is comprised of net metering customers. The cumulative generating capacity of active and billing net metering systems as of December 31, 2025, as a percentage of the Company's single hour peak load in Kentucky for calendar year 2025 is 91%. This percentage is calculated by dividing the cumulative generating capacity (kW-AC) of active, connected net metering systems as of December 31, 2025, by one percent (1%) of the Company's single hour peak load during 2025.

Calculation:

- Active and Connected Capacity: 7,977 kW AC

- One Percent (1%) of the Company's 2025 Single Hour Peak Load:
8,770 kW

- Percent: $7,977 \text{ kW} / 8,770 \text{ kW} = 91\%$

d. See the Company response to part (a) above.

PERSON RESPONSIBLE: Bruce L. Sailors – a., c., and d.
Nancy Connelly – b.

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
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Cancels and Supersedes
~~Third~~~~Second~~ Revised Sheet No. 89
Page 1 of 8

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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 thirty (30) 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 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.

Issued by authority of an Order of the Kentucky Public Service
Commission ~~in accordance with Order~~ dated ~~April 13, 2018~~~~April 24, 2009~~ in Case No. ~~201708-00321169~~.

(T)

(T)

Issued: ~~September-April 30~~~~29, 2018~~
Effective: ~~May 1~~~~September 30, 2018~~

(T)

(T)

Issued by ~~James P. Henning~~~~Julie Janson~~, President

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Erlanger, KY 41018

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Cancels and Supersedes
~~Third~~~~Second~~ Revised Sheet No. 89
Page 2 of 8

METERING (Cont'd.)

- (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.

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.

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4580 Olympic Blvd.
Erlanger, KY 41018

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~~Third~~~~Second~~ Revised Sheet No. 89
Page 3 of 8

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.
- (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

¹Area 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 multiple city blocks and with transformers at various locations.

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Erlanger, KY 41018

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Page 4 of 8

LEVEL 1 (Cont'd)

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.

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.

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4580 Olympic Blvd.
Erlanger, KY 41018

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Page 5 of 8

LEVEL 2 (Cont'd.)

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.
3. 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.

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:

1. 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.

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Erlanger, KY 41018

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Cancels and Supersedes
~~Third~~~~Second~~ Revised Sheet No. 89
Page 6 of 8

TERMS AND CONDITIONS FOR INTERCONNECTION (Cont'd.)

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 parallel 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 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.

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Cancels and Supersedes
~~Third~~Second Revised Sheet No. 89
Page 7 of 8

TERMS AND CONDITIONS FOR INTERCONNECTION (Cont'd.)

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 on-site 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 interferes with the operation of Company's electric system. In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition 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.

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Page 8 of 8

TERMS AND CONDITIONS FOR INTERCONNECTION (Cont'd.)

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.

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Commission ~~in accordance with Order~~ dated ~~April 13, 2018~~~~April 24, 2009~~ in Case No. ~~201708-00321169~~.

Issued: ~~September~~~~April 30~~~~29~~, 2018~~0~~
Effective: ~~May 1~~~~September 30~~, 2018~~0~~

Issued by ~~James P. Henning~~~~Julie Janson~~, President

Duke Energy Kentucky, Inc.
~~1262 Cox Road~~~~4580 Olympic Blvd.~~
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ 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 ~~fortyfivethirty~~ (4530) 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.

(T)

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

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Effective: ~~January 1, 2020~~~~April 14, 2018~~
Issued by ~~Amy B. Spiller~~~~James P. Henning~~, President /s/ ~~Amy B. Spiller~~~~James P. Henning~~

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~~1262 Cox Road~~~~4580 Olympic Blvd.~~
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KY.P.S.C. Electric No. 2
~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 2 of 8

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.

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KY.P.S.C. Electric No. 2
~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 3 of 8

APPLICATION AND APPROVAL PROCESS (Contd.)

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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.

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KY.P.S.C. Electric No. 2
~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 4 of 8

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.

¹Area 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 multiple city blocks and with transformers at various locations.

Duke Energy Kentucky, Inc.
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Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 5 of 8

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.
3. 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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KY.P.S.C. Electric No. 2
~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 6 of 8

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:

1. 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 parallel 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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~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 7 of 8

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 on-site 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 interferes with the operation of Company's electric system. In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition

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~~Fifth~~~~fourth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Third~~ Revised Sheet No. 89
Page 8 of 8

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.

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KY.P.S.C. Electric No. 2
~~Fifth~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~^{Fifth} 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.

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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.
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Duke Energy Kentucky, Inc.
1262 Cox Road
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KY.P.S.C. Electric No. 2
~~Fifth~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~^{Fifth} Revised Sheet No. 89
Page 2 of 8

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.

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Net metering credits are not transferable between customers or locations.

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KY.P.S.C. Electric No. 2
~~Fifth~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~^{Fifth} Revised Sheet No. 89
Page 3 of 8

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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.

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Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Fifth~~ Revised Sheet No. 89
Page 4 of 8

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.

¹Area 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 multiple city blocks and with transformers at various locations.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~^{Fifth} Revised Sheet No. 89
Page 5 of 8

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.
3. 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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~^{Fifth} Revised Sheet No. 89
Page 6 of 8

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:

1. 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 parallel 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

Issued by authority of an Order of the Kentucky Public Service
Commission dated ~~December 9, 2019~~^{April 27, 2020} in Case No. 2019-00440271.
Issued: ~~December 12, 2019~~^{May 1, 2020}
Effective: ~~January 1, 2020~~^{May 1 2020}
Issued by Amy B. Spiller, President /s/ Amy B. Spiller

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~~~Fifth~~ Revised Sheet No. 89
Page 7 of 8

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 on-site 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 interferes with the operation of Company's electric system. In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition

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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Fifth~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Fourth~~^{Fifth} Revised Sheet No. 89
Page 8 of 8

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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 1 of 7

INTERCONNECTION

(N)

AVAILABILITY

All customers seeking to interconnect with the Company's system must apply and complete the interconnection process described below.

METERING

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

APPLICATION AND APPROVAL PROCESS

The Customer shall submit an Application for Interconnection ("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.

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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 2 of 7

LEVEL 1 (Cont.)

- (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.

The interconnection will not be on an area or spot network¹.

- (6) The Company does not identify any violations of any applicable provisions of IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems".
- (7) 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.

¹Area 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 multiple city blocks and with transformers at various locations.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 3 of 7

LEVEL 1 (Cont.)

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.

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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 4 of 7

LEVEL 2 (Cont.)

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.
3. 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.

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:

1. The Company shall provide Customer net metering services, as applicable, 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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 5 of 7

TERMS AND CONDITIONS FOR INTERCONNECTION (Cont.)

(N)

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 parallel 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 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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 6 of 7

TERMS AND CONDITIONS FOR INTERCONNECTION (Cont.)

(N)

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 on-site 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 interferes with the operation of Company's electric system. In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition 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" 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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Original Sheet No. 83
Page 7 of 7

TERMS AND CONDITIONS FOR INTERCONNECTION (Cont.)

(N)

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 interconnection.
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.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY P.S.C. Electric No. 2
Original Sheet No. 84
Page 1 of 3

RIDER NM II
NET METERING II RIDER

(N)

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, including capacity participating under KYPSC Electric No. 2 Sheet No. 89 Rider NM I, 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 the Company's obligation to offer net metering to a new customer-generator may be limited. This Rider NM II will be effective and available to eligible Customer-generators on January 1, 2025. 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 forty-five (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.

Eligible Customer-generators taking service under Rider NM II and a standard rate schedule with a two-part rate structure may continue to take service under a two-part rate structure for 25 years after the start of service under Rider NM II.

Customers served under this Rider NM II will not be eligible for the Company's Rider AMO, Advanced Meter Opt-out. In addition, customers receiving temporary service are not eligible for this Rider NM II.

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

Regarding the net metering generating facility, Customer-generators may be prohibited from simultaneous participation in both this Rider NM-II and any Energy Resource Aggregation or any Distributed Energy Resource Aggregator, as those terms are defined by PJM or subsequent Regional Transmission Organization, other than an aggregation formed by Duke Energy Kentucky acting as the aggregator. Customer-generators who desire to participate in PJM markets through a third-party aggregator must contact the Company and such participation may result in termination in this Rider NM-II prior to such PJM market participation.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY P.S.C. Electric No. 2
Original Sheet No. 84
Page 2 of 3

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 kilowatt-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 amount of flow in each direction in two separate registers, 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.
- (2) If method (1) 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 or 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, as determined by the Company.

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 Company shall measure the amount of electricity delivered by the Company to the Customer during the billing period, in accordance with one of the methods listed under "METERING". The Customer bill will be calculated in accordance with the Customer's standard rate schedule. Bill charges will be in accordance with the same standard tariff that would apply if the Customer were not a customer-generator. Billing for Customer demand is as described in the Customer's standard tariff for receiving electric service.

The Company shall measure the amount of electricity delivered by the Customer to the Company during the billing period, in accordance with one of the methods listed under "METERING". The Company will provide a bill credit for each kWh Customer produces to the Company's grid. The dollar-denominated bill credit will be applied only to per kWh charges of the customer's electric bill.

For each billing period, the Company will net the dollar value of the total energy consumed and the dollar value of the total energy exported by the Customer. Any bill credits not applied to a Customer's electric bill in a billing period are "unused excess billing-period credits." Any unused excess billing-period credits will be carried forward and drawn on by Customer as needed. Unused excess billing-period credits existing at the time Customer's service is terminated end with Customer's account and are not transferrable between Customers or locations. For joint accounts, unused excess billing-period credits will be carried forward as long as at least one joint account holder remains in the same location.

Excess generation purchases by the Company will be recovered in Company's Fuel Adjustment Clause.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY P.S.C. Electric No. 2
Original Sheet No. 84
Page 3 of 3

EXCESS GENERATION AVOIDED COST CREDIT RATE

The Company will provide a bill credit for each kWh Customer produces to the Company's grid using the rate below.

Excess Generation Avoided Cost Credit per kWh (Residential):	\$0.062924
Excess Generation Avoided Cost Credit per kWh (Non-Residential):	\$0.063255

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 in Company's KYPSC Electric No. 2 Sheet No. 83, Interconnection.

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

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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 1 of ~~39~~

RIDER NM I

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NET METERING I RIDER - LEGACY

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AVAILABILITY

This net metering rider is closed to new participation. Customer facilities at the original installed and interconnected location receiving service under this rider before the effective date of Net Metering II Rider, KYPSC Electric No. 2 Sheet No. 84, January 1, 2025, may continue receiving continuous service under this rider for 25 years as specified in KRS 278.766, regardless of whether the premises are sold or conveyed during that 25-year period.

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This net metering rider terminates 25 years after the original effective date of Rider NM II; at which time Customers may seek participation in the then available Company options for customer-generators. Net Metering is available to eligible customer-generators. Net Metering I rider will terminate on January 1, 2050.

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Customers electing to terminate participation in this rider may not rejoin. 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.

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An eligible customer-generator as described above shall mean a retail electric customer of the Company with a generating facility that:

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- (1) Generates electricity using solar energy, wind energy, biomass or biogas energy, or hydro energy;
- (2) Has a rated capacity of not greater than forty-five (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.

Customers altering their generating facility beyond like replacement of equipment resulting in any increase in the generation capacity (i.e., inverter capacity for solar facilities) are required to reapply for interconnection; however the customer will not be removed from participation in this net metering rider unless the capacity increase is material. Upon interconnection agreement approval for the altered facilities, the customer will be

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Issued by authority of an Order of the Kentucky Public Service
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1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 2 of ~~39~~

removed from participation in this net metering rider if the capacity increase is material. The customer will take service under then current applicable options for customer-generators. A material increase in the generation capacity means a 1 kW or greater increase from the inverter capacity that was approved in the facility's initial interconnection study; total capacity not to exceed 45 kW. Increases in solar panel capacity will not be considered material as long as the panels are consistent with the capability of the generating facility's pre-existing inverter, i.e., the inverter that was approved in the generating facility's initial interconnection study. Replacement of eligible generating facilities in the ordinary course of business that result in only an incidental increase in capacity, i.e., an increase of capacity of less than 1 kW from the original generating capacity, will not trigger a change in Rider NM-1 legacy status. See page 4 of 4 for additional information. 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.

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

Regarding the net metering generating facility, ~~Lo~~Ccustomer-generators may be prohibited from simultaneous participation in both this Rider NM-1 and any Energy Resource Aggregation or any Distributed Energy Resource Aggregator, as those terms are defined by PJM or subsequent Regional Transmission Organization, other than an aggregation formed by Duke Energy Kentucky acting as the aggregator. Customer-generators who desire to participate in PJM markets through a third-party aggregator must contact the Company and such participation may result in termination in this Rider NM-I prior to such PJM market participation.

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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.

METERING (Contd.)

- (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 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.

Issued by authority of an Order of the Kentucky Public Service
Commission dated ~~October 11, 2024~~~~April 27, 2020~~ in Case No. 202319-
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Issued: ~~October 31, 2024~~~~May 1, 2020~~

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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 3 of ~~39~~

- (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. For joint accounts, unused credits will be carried forward as long as at least one joint account holder remains in the same location and eligible for this rider.

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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.

Issued by authority of an Order of the Kentucky Public Service
Commission dated ~~October 11, 2024~~~~April 27, 2020~~ in Case No. 202319-
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Issued: ~~October 31, 2024~~~~May 1, 2020~~

Effective: ~~January 1, 2025~~~~May 1, 2020~~

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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 4 of ~~39~~

Applications will be submitted by the Customer and reviewed and processed by the Company according to either Level 1 or Level 2 processes defined in the Company's KYPSC Electric No. 2 Sheet No. 83, Interconnection below.

APPLICATION AND APPROVAL PROCESS (Contd.)

~~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.~~

~~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.

When a customer-generator wishes to alter their facilities resulting in an increase in the generation capacity, per interconnection requirements, the customer-generator is required first to apply for a new interconnection agreement. (Changes in equipment not resulting in a generation capacity increase may be completed without application for a new interconnection agreement.)

The Company will review and process the new interconnection agreement according to either Level 1 or Level 2 processes defined in the Company's KYPSC Electric No. 2 Sheet No. 83. The Company will inform the Customer of whether or not the increase in capacity can be approved and whether the increase will terminate participation in Rider NM I.

If the Company determines that the capacity increase can be approved but participation in Rider NM I is to terminate, the Customer must provide confirmation and acceptance of the new interconnection agreement prior to the Company issuing the new interconnection agreement approval.

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.

Issued by authority of an Order of the Kentucky Public Service
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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 5 of ~~39~~

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- ~~(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.~~ (D)
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- ~~(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.~~ (D)
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- ~~(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.~~ (D)
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- ~~(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.~~ (D)
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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 6 of ~~39~~

LEVEL 1 (Contd.)

~~(6) The interconnection will not be on an area or spot network⁴.~~

~~(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.~~

⁴Area 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 multiple city blocks and with transformers at various locations.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 7 of ~~39~~

LEVEL 1 (Contd.)

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

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.~~
- ~~3. 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~~

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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 8 of ~~39~~

~~LEVEL 2(Contd.)~~

~~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.~~

~~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:~~

- ~~1. 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.~~

~~TERMS AND CONDITIONS FOR INTERCONNECTION (Contd.)~~

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1262 Cox Road
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KY.P.S.C. Electric No. 2
~~Seventh~~^{Sixth} Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~^{Fifth} Revised Sheet No. 89
Page 9 of ~~39~~

- (D)
- ~~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 parallel 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 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 on-site 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 (FDS). 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 FDS shall be located adjacent to Company's meters or the location of the FDS 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 FDS is not located directly~~

TERMS AND CONDITIONS FOR INTERCONNECTION (Contd.)

Issued by authority of an Order of the Kentucky Public Service
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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 10 of ~~39~~

~~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 interferes with the operation of Company's electric system. In non-emergency situations, Company shall give Customer notice of noncompliance including a description of the specific noncompliance condition 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.~~

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Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
~~Seventh~~~~Sixth~~ Revised Sheet No. 89
Cancels and Supersedes
~~Sixth~~~~Fifth~~ Revised Sheet No. 89
Page 11 of ~~39~~

TERMS AND CONDITIONS FOR INTERCONNECTION (Contd.)

- ~~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.~~
- ~~15.1. The Customer shall retain any and all Renewable Energy Credits (RECs) that may be generated by their generating facility.~~

(D)

Duke Energy Kentucky, Inc.
~~Electric No. 2~~
1262 Cox Road
Erlanger, KY 41018

KY P.S.C. Electric No. 2
First Revised Sheet No. 84
Cancels and Supersedes ~~KY P.S.C.~~
Original Sheet No. 84
Page 1 of 3

RIDER NM II
NET METERING II RIDER

(N)

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, including capacity participating under KYPSC Electric No. 2 Sheet No. 89 Rider NM I, 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 the Company's obligation to offer net metering to a new customer-generator may be limited. This Rider NM II will be effective and available to eligible Customer-generators on January 1, 2025. 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 forty-five (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.

Eligible Customer-generators taking service under Rider NM II and a standard rate schedule with a two-part rate structure may continue to take service under a two-part rate structure for 25 years after the start of service under Rider NM II.

Customers served under this Rider NM II will not be eligible for the Company's Rider AMO, Advanced Meter Opt-out. In addition, customers receiving temporary service are not eligible for this Rider NM II.

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

Regarding the net metering generating facility, Customer-generators may be prohibited from simultaneous participation in both this Rider NM-II and any Energy Resource Aggregation or any Distributed Energy Resource Aggregator, as those terms are defined by PJM or subsequent Regional Transmission Organization, other than an aggregation formed by Duke Energy Kentucky acting as the aggregator. Customer-generators who desire to participate in PJM markets through a third-party aggregator must contact the Company and such participation may result in termination in this Rider NM-II prior to such PJM market participation.

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Original Sheet No. 84
Page 2 of 3

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 kilowatt-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 amount of flow in each direction in two separate registers, 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.
- (2) If method (1) 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 or 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, as determined by the Company.

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 Company shall measure the amount of electricity delivered by the Company to the Customer during the billing period, in accordance with one of the methods listed under "METERING". The Customer bill will be calculated in accordance with the Customer's standard rate schedule. Bill charges will be in accordance with the same standard tariff that would apply if the Customer were not a customer-generator. Billing for Customer demand is as described in the Customer's standard tariff for receiving electric service.

The Company shall measure the amount of electricity delivered by the Customer to the Company during the billing period, in accordance with one of the methods listed under "METERING". The Company will provide a bill credit for each kWh Customer produces to the Company's grid. The dollar-denominated bill credit will be applied only to per kWh charges of the customer's electric bill.

For each billing period, the Company will net the dollar value of the total energy consumed and the dollar value of the total energy exported by the Customer. Any bill credits not applied to a Customer's electric bill in a billing period are "unused excess billing-period credits." Any unused excess billing-period credits will be carried forward and drawn on by Customer as needed. Unused excess billing-period credits existing at the time Customer's service is terminated end with Customer's account and are not transferrable between Customers or locations. For joint accounts, unused excess billing-period credits will be carried forward as long as at least one joint account holder remains in the same location.

Excess generation purchases by the Company will be recovered in Company's Fuel Adjustment Clause.

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KY P.S.C. Electric No. 2
First Revised Sheet No. 84
Cancels and Supersedes ~~KY P.S.C.~~
Original Sheet No. 84
Page 3 of 3

AVOIDED COST EXCESS GENERATION ~~AVOIDED COST~~ CREDIT (ACEGC) RATE

The Company will provide a bill credit for each kWh Customer produces to the Company's grid using the rate below.

Avoided Cost Excess Generation	Avoided Cost Credit per kWh: (Residential):	\$0.062924
Excess Generation	Avoided Cost Credit per kWh (Non-Residential):	\$0.063255

<u>Avoided Cost Category</u>	<u>ACEGC (\$/kWh)</u>
<u>Energy</u>	<u>\$0.056893</u>
<u>Environmental</u>	<u>Included in Energy</u>
<u>Carbon</u>	<u>Included in Energy</u>
<u>Ancillary Services</u>	<u>\$0.000360</u>
<u>Generation</u>	<u>\$0.003583</u>
<u>Transmission</u>	<u>\$0.001176</u>
<u>Distribution</u>	<u>\$0.012793</u>
<u>Job Creation</u>	<u>Not Included</u>
<u>TOTAL</u>	<u>\$0.074805</u>

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 in Company's KYPSC Electric No. 2 Sheet No. 83, Interconnection.

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

Issued by authority of an Order of the Kentucky Public Service
Commission dated ~~June 1, 2026~~October 11, 2024 in Case No. 20253-
00258413.

Issued: ~~July 10~~October 31, 20264

Effective: ~~July 10~~ January 1, 20265

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

**Duke Energy Kentucky
Case No. 2020-00302
STAFF First Request for Information
Date Received: June 30, 2026**

STAFF-DR-01-002

REQUEST:

Describe how many net-metering and interconnection customers the utility has, including what type of generating facility and energy storage, if applicable, each customer has.

RESPONSE:

As of July 7, 2026, the company serves 1,008 active customers billed under net metering tariffs, all with solar generating facilities. Of these customers, the Company is aware of 47 customers that have battery energy storage systems paired with their solar facilities. The Company also serves 15 non-net metering, interconnection customers, all with solar generating facilities, and none have battery energy storage systems known to the Company.

PERSON RESPONSIBLE: Bruce L. Sailors

Duke Energy Kentucky
Case No. 2020-00302
STAFF First Request for Information
Date Received: June 30, 2026

STAFF-DR-01-003

REQUEST:

Provide a breakdown of the approximate costs for the utility associated with interconnection for the past five years. In this response, separate the approximate costs associated with level 1 and level 2 applications.

RESPONSE:

The Company, in order to prepare the below cost estimate, uses five years of historical data from July 1, 2021 through June 30, 2026, to provide the approximate costs associated with level 1 and level 2 interconnection applications. Consistent with the Company's current practice, a 45 kW AC threshold was used to distinguish level 1 and level 2 applications for purpose of preparing cost estimates.

The estimates include estimated administrative review costs performed by Renewable Service Center (RSC) and estimated technical reviews/interconnection study costs performed by Distribution Protection, Automation & Control (DPAC). The methodology for estimating administrative review and technical reviews/interconnection study costs is explained in the Company's response to STAFF-DR-01-004. The estimate calculation summarizes the number of level 1 and level 2 applications processed during the five-year period and associated costs.

The cost estimate breakdown is provided below.

Year 1 (July 1, 2021 - June 30, 2022)

	Connected	Administrative Review	Technical Review/ Interconnection Studies	Total
Level 1	210	\$ 14,700	\$ 35,299	\$ 49,999
Level 2	1	\$ 70	\$ 224	\$ 294
Total	211	\$ 14,770	\$ 35,523	\$ 50,293

Year 2 (July 1, 2022 - June 30, 2023)

	Connected	Administrative Review	Technical Review/ Interconnection Studies	Total
Level 1	364	\$ 25,480	\$ 61,185	\$ 86,665
Level 2	1	\$ 70	\$ 6,685	\$ 6,755
Total	365	\$ 25,550	\$ 67,870	\$ 93,420

Year 3 (July 1, 2023 - June 30, 2024)

	Connected	Administrative Review	Technical Review/ Interconnection Studies	Total
Level 1	103	\$ 7,210	\$ 17,313	\$ 24,523
Level 2	6	\$ 420	\$ 8,783	\$ 9,203
Total	109	\$ 7,630	\$ 26,096	\$ 33,726

Year 4 (July 1, 2024 - June 30, 2025)

	Connected	Administrative Review	Technical Review/ Interconnection Studies	Total
Level 1	147	\$ 10,290	\$ 24,709	\$ 34,999
Level 2	0	\$ -	\$ -	\$ -
Total	147	\$ 10,290	\$ 24,709	\$ 34,999

Year 5 (July 1, 2025 - June 30, 2026)

	Connected	Administrative Review	Technical Review/ Interconnection Studies	Total
Level 1	47	\$ 3,290	\$ 7,900	\$ 11,190
Level 2	0	\$ -	\$ -	\$ -
Total	47	\$ 3,290	\$ 7,900	\$ 11,190

PERSON RESPONSIBLE: Bruce Sailors (table),
Nancy Connelly & Erika Prado (inputs)

STAFF-DR-01-004

REQUEST:

Provide an overview of how the interconnection application and agreement process works. In this overview, explain approximately how long each step in the process takes, who is responsible for initiating each step of the process, when progress is communicated to the applicant, and what costs are associated with this process for the utility and applicants. Also explain, if a customer does not qualify or is ineligible during the review process, the protocols and considerations for coming to that determination and communicating that decision to the applicant.

RESPONSE:

1. After customer submits application package, Renewables Service Center (RSC) reviews package for completeness. The Company estimates that the average total time, from the initial application review to permission to operate being granted is approximately two hours, and estimates costs at average rate of \$35/hr.
2. Technical reviews/interconnection studies performed by Distribution Protection, Automation & Control (DPAC)
 - a. Certified inverter-based systems less than or equal to 45 kW – technical review is performed by contract engineers at estimated average time of 1.5 hours, with average costs estimated at \$112.06/hour. Review consists of ensuring that system is sized appropriately for usage and for the electric service to the facility, taking into consideration the impact of other DER customers on the service

transformer and circuit, if applicable. A simple interconnection approval letter is system-generated. Interconnection agreement consists of signed application plus approval letter.

- b. Certified inverter-based systems greater than 45 kW and less than 250 (not eligible for net metering.) Review is performed by contract engineers, with costs estimated at the same rate, with an estimated average of 2 hours. Same review as for 45 kW and below but may have greater distribution impact and may include more data collection about the customer's usage and the feeder loading. A simple interconnection approval letter is system-generated. Interconnection agreement consists of signed application plus approval letter.
- c. Certified inverter based systems greater than or equal to 250 kW and less than 1 MW. Review is performed by a Duke Energy Senior or Lead Engineer. Review is the same as for the smaller systems, except that the review includes review of a required communication and control interface which includes additional design and programming. The average review time is estimated to be 12 hours at average estimated cost of \$66.4/hr. And interconnection agreement is prepared by the Interconnection Business Consulting group and is estimated to take, on average, 5.5 hours, with costs estimated at \$73.50/hr.
- d. Certified inverter-based systems 1 MW and greater, and all rotating machinery. System Impact Studies performed by Duke Energy Senior or Lead Engineer. Studies consist of System Impact Study, with an estimated average time of 60 hours at an average estimated cost of \$66.4/hr. Facilities studies through Project Managers are also required, with an average estimated time of 35 hours at an

average estimated cost of \$65.63/hr. Ideally both the System Impact Study costs and the Facilities Study cost should be paid for by the interconnecting customer.

An interconnection agreement written by Interconnection Business Consulting group and takes 5.5 hours at \$73.50/hr.

If a customer's application is incomplete or insufficient for approval, please see the Company's response to STAFF-DR-01-007 for steps taken by the Company.

PERSON RESPONSIBLE: Nancy Connelly
Erika Prado

**Duke Energy Kentucky
Case No. 2020-00302
STAFF First Request for Information
Date Received: June 30, 2026**

STAFF-DR-01-005

REQUEST:

Explain whether the utility recovers in rates any expenses for the interconnection application process. If not, explain why not.

RESPONSE:

Any expenses related to the interconnection process that are not charged directly to customers applying for interconnection are embedded in the Company's rates.

PERSON RESPONSIBLE: Bruce L. Sailors

**Duke Energy Kentucky
Case No. 2020-00302
STAFF First Request for Information
Date Received: June 30, 2026**

STAFF-DR-01-006

REQUEST:

Explain which IEEE Standard is currently applicable for purposes of interconnection. If IEEE Standard 1547-2018 is not currently applicable, explain the utilities' position for implementing IEEE Standard 1547-2018.

RESPONSE:

IEEE 1547-2018 is currently applicable.

PERSON RESPONSIBLE: Nancy Connelly

STAFF-DR-01-007

REQUEST:

Explain the interconnection requirements if a customer does not qualify or is ineligible during the review process for a level one application; a level two application; and both levels.

RESPONSE:

For a Level 1 application, the customer must be UL 1741 certified inverter-based less than 45 kW. In order for the application to be deemed complete the customer must submit an application, a oneline diagram, spec sheets for the solar panels and inverters, and a site map. The customer's design must comply with IEEE 1547-2018 and Duke Energy Kentucky's Electric Service Requirements manual, and the screens for a Level 1 interconnection in the State of Kentucky Net Metering and Interconnection Guidelines. If anything is missing from the customer's package, an incomplete letter will be sent to the customer detailing what must be submitted in order for the package to be complete.

Since Level 2 can comprise anything above 45 kW to the multi-megawatt size, non-compliant inverters and rotating machinery what constitutes a complete package and complete adherence to qualifications may vary but at the most basic level they would submit the application, oneline diagram, spec sheets for all equipment, site map and any additional design requirements such as relay settings and sequence of operations. Like the Level 1 the package would be expected to comply with IEEE 1547-2018, Duke Energy Kentucky's Electric Service Requirements Manual. It would be expected to comply with

the screens for a Level 2 interconnection in the State of Kentucky Net Metering and Interconnection Guidelines but may require further studies depending on size and complexity. If the package is deemed incomplete, an incomplete letter will be sent to the customer detailing what must be submitted in order for the package to be complete and may be accompanied by a request for a technical scoping meeting.

PERSON RESPONSIBLE: Nancy Connelly as to technical requirements
 Erika Prado as to communications with customer

STAFF-DR-01-008

REQUEST:

Explain how behind the meter battery energy storage resources are considered under the existing tariff for both net-metering and non-net metering customers.

RESPONSE:

Certain net-metering customers have battery energy storage systems paired with their solar generating facilities. These batteries could be charged from the customers' solar array and/or the import of power from the grid. For interconnecting customers, the Company requires that these battery systems be used for backup power purposes only. They are not an eligible generating source for net metering under KRS 278.465(2), which defines an "Eligible electric generating facility." The Company requires that interconnecting customers configure battery energy storage systems to prevent the export of stored battery energy to the Company's distribution system. Accordingly, any energy exported to the grid originates from the customer's solar generating facilities rather than the battery. The Company currently does not have any non-net metering customers with battery energy storage systems that have completed the interconnection process. The Company is not aware of any customers who have a battery storage system and are not interconnected. If such systems exist, the Company has not been informed.

The Company does not currently have an applicable tariff that compensates customers for energy exported to the grid from a battery energy storage system.

PERSON RESPONSIBLE: Bruce L. Sillers

STAFF-DR-01-009

REQUEST:

Explain what safety and technical standards are used to safely and reliably integrate behind-the-meter battery energy storage resources. Explain, if applicable, what changes to software, communications, billing, and utility systems would need to change in order to accommodate third party DER- aggregation. If not applicable, explain why not.

RESPONSE:

Regarding what safety and technical standards are used to safely and reliably integrate behind-the-meter battery energy storage resources: the Company's existing behind the meter battery storage customers are all under the Rider Net Metering I or Rider Net Metering II, and are connected in one of two ways: the battery and the solar use the same inverter, or the battery and solar have different inverters and connect to a gateway device. These systems are not designed for the battery to export to the grid, they are used either for backup power when the customer is disconnected from the grid, or they serve the customer's load outside during times when the solar is unable to generate. In order to safely and reliably integrate behind-the-meter battery energy storage resources into a framework that accommodates third party DER aggregation, it would be necessary for there to be some way for the batteries to export and some means of determining which part of the export was due to the battery and which part was due to the solar. This might be a system with the communication among the customer, the aggregator and PJM. But Duke Energy Kentucky would also have to have this information if the customer's solar was participating in net

metering and the battery was participating in the aggregation so that there is not double-counting.

Additionally, for the portion of the question regarding safety and reliability, inverters should be certified to UL 1741-SB and the solar/battery/gateway system should be compliant with IEEE 1547-2018. For systems larger than 250 kW, non-inverter-based systems, or non-compliant inverters, additional protection and control equipment will be required that is not specific to energy storage systems.

Regarding what would be needed to accommodate third-party DER aggregation generally:

Duke Energy Kentucky is still in the process of assessing what changes to software, communications, billing, and utility systems would need to change in order to accommodate third party DER- aggregation. A cross-functional team, consisting of subject matter experts from impacted business areas, is analyzing the available information and determining which of the Company's existing processes, technologies and operating procedures will need to be modified and/or how. PJM's current target implementation date is currently February 1, 2028, and the Company understands that PJM is still refining its implementation strategy with stakeholder input. As new information and/or guidance from PJM becomes available, the Company will incorporate such into its analysis.

PERSON RESPONSIBLE:

As to technical requirements, safety, and reliability of behind-the-meter battery energy storage resources:

Nancy Connelly

As to accommodation of third party DER-aggregation generally: Dana Adams.