P.S.C. Electric No. 10, Original Sheet No. 57

Standard Rate Rider

**NMS Net Metering Service** 

#### **APPLICABLE**

In all territory served.

### **AVAILABILITY OF SERVICE**

Available to any customer-generator who owns and operates a generating facility located on Customer's premises that generates electricity using solar, wind, biomass or biogas, or hydro energy in parallel with Company's electric distribution system to provide all or part of Customer's electrical requirements, and who executes Company's written Application for Interconnection and Net Metering. The generation facility shall be limited to a maximum rated capacity of 30 kilowatts. This Standard Rate Rider is intended to comply with all provisions of the Interconnection and Net Metering Guidelines approved by the Public Service Commission of Kentucky, which can be found on-line at www.psc.ky.gov as Appendix A to the January 8, 2009 Order in Administrative Case No. 2008-00169.

#### **DEFINITIONS**

"Billing period" shall be the time period between the dates on which Company issues the customer's

"Billing Period Credit" shall be the electricity generated by the customer that flows into the electric system and which exceeds the electricity supplied to the customer from the electric system during any billing period. A billing period credit is a kWh-denominated electricity credit only, not a monetary credit.

#### **METERING AND BILLING**

Net metering service shall be measured using a single meter or, as determined by Company, additional meters and shall be measured in accordance with standard metering practices by metering equipment capable of registering power flow in both directions for each time period defined by the applicable rate schedule. This net metering equipment shall be provided without any cost to the Customer. This provision does not relieve Customer's responsibility to pay metering costs embedded in the Company's Commission-approved base rates. Additional meters, requested by Customer, will be provided at Customer's expense.

If electricity generated by Customer and fed back to Company's system exceeds the electricity supplied to Customer from the system during a billing period, Customer shall receive a billingperiod credit for the net delivery on Customer's bill for the succeeding billing periods. If Customer takes service under time-of-use or time-of-day rate schedule, Company will apply billing-period credits Customer creates in a particular time-of-day or time-of-use block only to offset net energy consumption in the same time-of-day or time-of-use blocks in any billing period. Any such 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.

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**ISSUED BY:** 

Isl Edwin R. Staton, Vice President

State Regulation and Rates

Louisville, Kentucky

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**KENTUCKY** PUBLIC SERVICE COMMISSION

> JEFF R. DEROUEN **EXECUTIVE DIRECTOR**

> > TARIFF BRANCH

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7/1/2015

P.S.C. Electric No. 10, Original Sheet No. 57.1

Standard Rate Rider

### **NMS Net Metering Service**

#### **NET METERING SERVICE INTERCONNECTION GUIDELINES**

General - Customer shall operate the generating facility in parallel with Company's system under the following conditions and any other conditions required by Company where unusual circumstances arise not covered herein:

- 1. Customer to own, operate, and maintain all generating facilities on their premises. Such facilities shall include, but not be limited to, necessary control equipment to synchronize frequency, voltage, etc., between Customer's and Company's system as well as adequate protective equipment between the two systems. Customer's voltage at the point of interconnection will be the same as Company's system voltage.
- 2. Customer will be responsible for operating all generating facilities owned by Customer, except as specified hereinafter. Customer will maintain its system in synchronization with Company's system.
- 3. Customer will be responsible for any damage done to Company's equipment due to failure of Customer's control, safety, or other equipment.
- 4. Customer agrees to inform Company of any changes it wishes to make to its generating or associated facilities that differ from those initially installed and described to Company in writing and obtain prior approval from Company.
- Company will have the right to inspect and approve Customer's facilities described herein, and to conduct any tests necessary to determine that such facilities are installed and operating properly; however, Company will have no obligation to inspect, witness tests, or in any manner be responsible for Customer's facilities or operation thereof.
- 6. Customer assumes all responsibility for the electric service on Customer's premises at and from the point of delivery of electricity from Company and for the wires and equipment used in connection therewith, and will protect and save Company harmless from all claims for injury or damage to persons or property occurring on Customer's premises or at and from the point of delivery of electricity from Company, occasioned by such electricity or said wires and equipment, except where said injury or damage will be shown to have been occasioned solely by the negligence or willful misconduct of Company.

Level 1 - A Level 1 installation is defined as an inverter-based generator certified as meeting the requirements of Underwriters Laboratories Standard 1741 and meeting the following conditions:

- The aggregated net metering generation on a radial distribution circuit will not exceed 15% of the line section's most recent 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. The aggregated net metering generation on a shared singled-phase secondary will not exceed 20 kVA or the nameplate rating of the service transformer.
- 3. A single-phase net metering generator interconnected on the center tap neutral of a 240 volt service 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.

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

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P.S.C. Electric No. 10, Original Sheet No. 57.2

Standard Rate Rider

### NMS **Net Metering Service**

#### **NET METERING SERVICE INTERCONNECTION GUIDELINES** (continued)

- 4. A net metering generator interconnected to Company's three-phase, three-wire primary distribution lines, shall appear as a phase-to-phase connection to Company's primary
- 5. A net metering generator interconnected to Company's three-phase, four-wire primary distribution lines, shall appear as an effectively grounded source to Company's primary distribution line.
- 6. A net metering generator will not be connected to an area or spot network.
- 7. There are no identified violations of the applicable provisions of IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems".
- Company will not be required to construct any facilities on its own system to accommodate the net metering generator.

Customer desiring a Level 1 interconnection shall submit a "LEVEL 1 - Application for Interconnection and Net Metering." Company shall notify Customer within 20 business days as to whether the request is approved or, if denied, the reason(s) for denial. If additional information is required, the Company will notify Customer, and the time between notification and submission of the information shall not be counted towards the 20 business days. Approval is contingent upon an initial inspection and witness test at the discretion of Company.

Level 2 – A Level 2 installation is defined as generator that is not inverter-based; that uses equipment not certified as meeting the requirements of Underwriters Laboratories Standard 1741; or that does not meet one or more of the conditions required of a Level 1 net metering generator. A Level 2 Application will be approved if the generating facility meets the Company's technical interconnection requirements. Those requirements are available on line at www.lge-ku.com and upon request.

Customer desiring a Level 2 interconnection shall submit a "LEVEL 2 - Application for Interconnection and Net Metering." Company shall notify Customer within 30 business days as to whether the request is approved or, if denied, the reason(s) for denial. If additional information is required, the Company will notify Customer, and the time between notification and submission of the information shall not be counted towards the 30 business days. Approval is contingent upon an initial inspection and witness test at the discretion of Company.

Customer submitting a "Level 2 - Application for Interconnection and Net Metering" will provide a non-refundable inspection and processing fee of \$100, and in the event that the Company determines an impact study to be necessary, shall be responsible for any reasonable costs of up to \$1,000 of documented costs for the initial impact study.

Additional studies requested by Customer shall be at Customer's expense.

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Standard Rate Rider

# NMS Net Metering Service

#### **CONDITIONS OF INTERCONNECTION**

Customer may operate his net metering generator in parallel with Company's system when complying with the following conditions:

- 1. Customer shall install, operate, and maintain, at Customer's sole cost and expense, any control, protective, or other equipment on Customer's system required by Company's technical interconnection requirements based on IEEE 1547, NEC, accredited testing laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the net metering generating facility in parallel with Company's system. Customer bears full responsibility for the installation, maintenance and safe operation of the net metering generating facility. Upon reasonable request from Company, Customer shall demonstrate compliance.
- 2. Customer shall represent and warrant compliance of the net metering generator with:
  - a) any applicable safety and power standards established by IEEE and accredited testing laboratories;
  - b) NEC, as may be revised from time-to-time;
  - c) Company's rules and regulations and Terms and Conditions, as may be revised by timeto-time by the Public Service Commission of Kentucky;
  - d) the rules and regulations of the Public Service Commission of Kentucky, as may be revised by time-to-time by the Public Service Commission of Kentucky:
  - e) all other local, state, and federal codes and laws, as may be in effect from time-to-time.
- 3. Any changes or additions to Company's system required to accommodate the net metering generator shall be Customer's financial responsibility and Company shall be reimbursed for such changes or additions prior to construction.
- 4. Customer shall operate the net metering generator 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. 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.
- 5. Customer shall be responsible for protecting, at Customer's sole cost and expense, the net metering 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 net metering generator resulting solely from the negligence or willful misconduct on the part of the Company.
- 6. 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 net metering generator comply with the requirements of this rate schedule.

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P.S.C. Electric No. 10, Original Sheet No. 57.4

Standard Rate Rider

### NMS Net Metering Service

### **CONDITIONS OF INTERCONNECTION (continued)**

- 7. Where required by the Company, Customer shall furnish and install on Customer's side of the point of interconnection a safety disconnect switch which shall be capable of fully disconnecting Customer's net metering generator from Company's electric service under the full rated conditions of Customer's net metering generator. The external disconnect switch (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, Customer shall be responsible for ensuring the location of the EDS is properly and legibly identified for so long as the net metering generator is operational. The disconnect switch shall be accessible to Company personnel at all times. Company may waive the requirement for an external disconnect switch for a net metering generator at its sole discretion, and on a case by case basis.
- 8. 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 net metering generator if Company believes that:
  - a) continued interconnection and parallel operation of the net metering generator 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 net metering generator is not in compliance with the requirements of this rate schedule, and the non-compliance adversely affects the safety, reliability or power quality of Company's electric system; or
  - c) the net metering generator 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 Customer to isolate only the net metering generator, Company may isolate Customer's entire facility.
- 9. Customer agrees that, without the prior written permission from Company, no changes shall be made to the generating facility as initially approved. Increases in net metering generator 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 net metering generator capacity is allowed without approval.
- 10. Customer shall protect, indemnify and hold harmless 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

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Standard Rate Rider

#### **NMS Net Metering Service**

### **CONDITIONS OF INTERCONNECTION** (continued)

of persons or damage to property caused by Customer or Customer's employees, agents, representatives and contractors in tampering with, repairing, maintaining or operating Customer's net metering generator or any related equipment or any facilities owned by Company, except where such injury, death or damage was caused or contributed to by the fault or negligence of Company or its employees, agents, representatives or contractors. The liability of Company to Customer for injury to person and property shall be governed by the tariff(s) for the class of service under which Customer is taking service.

- 11. Customer shall maintain general liability insurance coverage (through a standard homeowner's, commercial or other policy) for generating facilities. Customer shall upon request provide Company with proof of such insurance at the time that application is made for net metering.
- 12. 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.
- 13. 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 Customer in writing and list what must be done to place the facility in compliance.
- 14. Customer shall retain any and all Renewable Energy Credits (RECs) generated by Customer's generating facilities.

#### **TERMS AND CONDITIONS**

Except as provided herein, service will be furnished under Company's Terms and Conditions applicable hereto.

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

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Standard Rate Rider

P.S.C. Electric No. 10, Original Sheet No. 57.6

NMS **Net Metering Service** 

### **LEVEL 1**

Application for Interconnection and Net Metering

Use this application form only for a generating facility that is inverter based and certified by a nationally recognized testing laboratory to meet the requirements of UL 1741.

Submit this Application to:

Louisville Gas and Electric Company, Attn: Customer Commitment, P. O. Box 32010, Louisville, KY 40232

If you have questions regarding this Application or its status, contact LG&E at:

502-627-2202 or customer.commitment@lge-ku.com

Customer Name:	Account Number:
Customer Address:	II
Customer Phone No.: Customer	er E-mail Address:
Project Contact Person:	
Phone No.: E-mail Ad	dress (Optional):
Provide names and contact information for other contractors, instagenerating facilities:	allers, or engineering firms involved in the design and installation of the
Energy Source:SolarWindHydro	BiogasBiomass
Inverter Manufacturer and Model #:	
Inverter Power Rating:	Inverter Voltage Rating:
Power Rating of Energy Source (i.e., solar panels, wind turbine):	
Is Battery Storage Used:NoYes If Yes, Batte	ery Power Rating:
Attach documentation showing that inverter is certified by a nation	ally recognized testing laboratory to meet the requirements of UL 1741.
Attach site drawing or sketch showing location of Utility's meter, $\varepsilon$ inverter.	energy source, (optional: Utility accessible disconnect switch) and
Attach single line drawing showing all electrical equipment from fuses, breakers, panels, transformers, inverters, energy source, w	he Utility's metering location to the energy source including switches, rire size, equipment ratings, and transformer connections.
Expected Start-up Date:	

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7/1/2015

P.S.C. Electric No. 10, Original Sheet No. 57.7

Account Number:

Standard Rate Rider

Customer Name:

Customer Address:

### NMS Net Metering Service

### **LEVEL 2**

Application for Interconnection and Net Metering

Use this application form when a generating facility is not inverter-based or is not certified by a nationally recognized testing laboratory to meet the requirements of **UL** 1741 or does not meet any of the additional conditions under Level 1.

Submit this Application, along with an application fee of \$100, to:

Louisville Gas and Electric Company, Attn: Customer Commitment, P. O. Box 32010, Louisville, KY 40232

If you have questions regarding this Application or its status, contact LG&E at:

502-627-2202 or customer.commitment@lge-ku.com

Phone No.: E-mail Address (Optional):			
	names and contact information for other contractors, installers, or rating facilities:	engineering firms involved in the design a	nd installation of
Fotal Ger	nerating Capacity of Generating Facility:		
Type of G	Generator:Inverter-BasedSynchronousIr	nduction	
Power Sc	ource:SolarWindHydro	BiogasBiomass	
Adequate the follow 1. 2. 3.		electrical equipment from the generate enerators, transformers, switchgear, switch	or to the point of
4.	Relevant ratings of equipment. Transformer information sarrangements, and impedance.		
5. 6.	If protective relays are used, settings applicable to the interdescription of how the relay is programmed to operate as applicable A description of how the generator system will be operated incl	cable to interconnection protection.	relays are used, a
7.	For inverters, the manufacturer name, model number, and Ad	C power rating. For certified inverters, att	111 4744
8. 9.	For synchronous generators, manufacturer and model number, For induction generators, manufacturer and model number, natural natura	, nameplate ratings, and impedance data (	Xd, Xd, & Xd).
	r Signature:	Date:	

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