

P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 4CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 4APPLYING TO MISSOURI SERVICE AREA

\*A. ELECTRIC POWER PURCHASES FROM QUALIFYING FACILITIES - (CONTINUED)

- III. Contract. Whether or not purchases are made by Company under the standard rates, the Company shall not be required to make any purchase from Customer until Company and Customer have entered into a written contract for such purchases.
- IV. All provisions of this tariff are subject to all Commission rules and regulations as may be revised from time-to-time. All terms of the tariff are also subject to the Commission's normal complaint and arbitration procedures.
- V. Guideline Technical Requirements for Parallel Operation with the Company's System.

1. Introduction

The minimum technical requirements for safe parallel operation of Customer-owned electrical generating facilities with the Company's system are set forth below. These requirements will serve as a guide for Company and Customer engineering when planning such an installation; however, it is recognized that each installation may have specific requirements other than those set forth herein as a result of each installation's unique nature.

2. General Technical Requirements

A. Protection

- (1) Customer shall install protective devices capable of detecting fault conditions on both his system and the Company's system. These devices will separate Customer's system from the Company's system either directly or through an auxiliary device such as a circuit breaker. The separating device must be capable of interrupting the available fault current. The detection sensitivity and operating speed of these devices must be compatible with protective devices on the Company's system.
- (2) The Customer shall install equipment designed to automatically separate his system from the Company's system upon loss of the normal Company supply.
- (3) The Customer is responsible for protecting Customer-owned equipment in such a manner that faults or other disturbances on the Company's system or on Customer's system do not cause damage to his equipment.

\* Indicates Change.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 5CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 5APPLYING TO MISSOURI SERVICE AREA**\*A. ELECTRIC POWER PURCHASES FROM QUALIFYING FACILITIES - (CONTINUED)**

- (4) Customer shall furnish information to Company regarding his proposed generation equipment and protective devices prior to parallel operation. Company will check the adequacy of this proposed equipment and its compatibility with protective devices on the Company's system and will either approve as submitted or specify additional equipment which will be required in order to begin parallel operation with the Company's system.
- (5) All protective relay settings that would affect any Company system relay settings will be specified by Company. These relays will be initially calibrated by Company to assure proper operation.
- (6) A manual visible disconnect switch must be provided which is under the exclusive jurisdictional control of the Company dispatcher. This manual switch must have the capability to be locked out of service by a Company-authorized switchman.
- (7) The above statements are the basic minimum protection requirements that would be associated with parallel generation. Additional requirements and/or equipment would depend on an in-depth study of each proposed connection.

**B. Operation**

- (1) Under certain conditions the intertie breaker (if one is required) must be operated by Customer in order for Company to operate the manual disconnect switch. Company may request this action for any of the following reasons:
  - a. System emergency.
  - b. Inspection of Customer's generating equipment or protective equipment reveals an unsafe condition.
  - c. Customer's generating equipment interferes with other customers or with the operation of the Company's system.
  - d. An outage is scheduled on the Company's supply circuit or feeder.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 6CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 6APPLYING TO MISSOURI SERVICE AREA**\*A. ELECTRIC POWER PURCHASES FROM QUALIFYING FACILITIES - (CONTINUED)**

- (2) Customer shall be solely responsible for properly synchronizing his generating equipment with the Company's frequency and voltage. This includes resynchronizing his generator(s) after system outages or disturbances.

**C. Quality of Service**

- (1) The interconnection of Customer's generating equipment with the Company's system shall not cause any reduction in the quality of service being provided to other customers or cause any undesirable effect on any Company facilities. In order to achieve this objective, wave form guidelines presently applicable to Customer's facility and which are measured at the point of interconnection between the Company and the qualifying facility are as follows:

- a. The phase unbalance must be less than 1%,
- b. The arithmetic sum of harmonics in the current or voltage must be less than 10%, and
- c. The root of the sum of the squares of harmonics in the current or voltage must be less than 5%.

The above lists should be viewed as general guidelines which are subject to change as dictated by experience as well as the unique nature of the electrical system at each point of interconnection.

- (2) The power factor of Customer's load with his generating equipment connected shall not be less than that specified by retail tariff for his applicable customer class.

**D. Metering**

Parallel generating facilities connected to Company's system are divided into two groups: (1) "Two-way Power Flow," and (2) "One-way Power Flow." "Two-way Power Flow" would apply to Customer's facilities whose load is sufficiently variable or smaller than its generating capacity so that excess Customer-generated power could flow into the Company's system. "One-way Power Flow" would apply to Customer's facilities whose load is significantly larger than their generating capacity so that no Customer-generated power would flow into the Company's system except under fault conditions.

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This type of installation provides for the interchange of energy in either direction as a normal operating mode.

The revenue metering for Two-way Power Flow installations shall include two series connected watthour meters with detents. One meter shall be connected to measure energy supply to Customer from Company; the other meter shall measure Customer-generated energy supplied to Company. The meter detents prevent operation of either meter in the reverse direction.

Additional metering may or may not be required depending on the terms of the contract between Company and Customer.

**(2) One-way Power Flow**

This type of installation does not allow the interchange of energy from Customer to the Company.

The intertie circuit breaker will be tripped by equipment capable of detecting the reverse power flow condition toward the Company's system.

This type installation requires a single revenue meter installation with detent to prevent operation of the meter in the reverse direction.

Additional metering may or may not be required depending on the terms of a contract between Company and Customer.

**E. Other Requirements**

(1) All Customer installations shall adhere to any applicable requirements of the National Electrical Safety Code, the National Electric Code, Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), local electric codes, applicable NEMA codes, OSHA, and Company's Electric Service Rules as set forth in published tariffs.

(2) Customer will bear all interconnection costs of parallel operation over and above the normal cost to serve his load.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 8CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 8APPLYING TO MISSOURI SERVICE AREA**B. ELECTRIC POWER PURCHASES FROM QUALIFIED NET METERING UNITS**

\*I. Application. This tariff applies to Union Electric Company d/b/a Ameren Missouri (Company) purchases of electric energy from Qualified Net Metering Units (hereinafter referred to as "Customer-Generator") under the provisions of Section 386.890RSMo. the 'Net Metering and Easy Connection Act'. The Customer-Generator must meet the general technical requirements, testing requirements, and liability requirements listed under the provisions of Section 386.890RSMo. the 'Net Metering and Easy Connection Act', as well as the requirements specified in the Customer-Generators' applicable rate class under the Company's Schedule 5 - Schedule of Rates for Electric Service. Service under this rate shall be evidenced by a contract between Customer-Generator and the Company per the Interconnection Application/Agreement for Net Metering Systems With Capacity of 100 kW or less.

The availability of net metering is limited to those types of generation that have been certified by the Missouri Department of Natural Resources as renewable energy resources and which is intended primarily to offset part or all of the customer-generator's own electrical energy requirements. Net metering cannot be elected in conjunction with "Optional Time-of-Day Rate" service of any of Company's rate schedule.

Company will provide net metering service until the total rated generating capacity used by Customer-Generators is equal to or in excess of five percent (5.0%) of Company's single-hour peak load during the previous year. However in a given calendar year, no retail electric supplier shall be required to approve any application for interconnection if the total rated generating capacity of all application for interconnection already approved to date by said supplier in said calendar year equals or exceeds one percent (1.0%) of said supplier's single-hour peak load for the previous calendar year.

**II. Billing.**

a) Energy Pricing and Billing. Each billing period, Company shall measure the net electrical energy produced or consumed and bill the Customer-Generator as follows:

- i. If the electricity supplied by Company exceeds the electricity supplied by the Customer-Generator to Company, Company's bill will reflect the net electricity supplied by Company and the Customer-Generator's current service classification.
- ii. If the electricity supplied by Company is less than the electricity supplied by the Customer-Generator to Company, Company's bill will include a credit for the net electricity received by Company in accordance with the Non-Time-Differentiated Energy Rates contained in Section A.II.1 herein.

b) Minimum Bill

Net metering does not modify or eliminate any customer obligation(s) or billing provision(s) of the Customer's current rate schedule for delivery of electric power and energy such as the Customer Charge or any minimum billing demand (if applicable).

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 1st Revised SHEET NO. 9CANCELLING SCHEDULE NO. 1 Original SHEET NO. 9APPLYING TO MISSOURI SERVICE AREA**\*\*B. ELECTRIC POWER PURCHASES FROM QUALIFIED NET METERING UNITS -**  
**(CONTINUED)****\* c) Avoided Fuel Cost**

Company's Avoided Fuel Cost as defined in 4 CSR 240-20.065 is \$0.0143 per kWh. However, this rate is not applicable to net metering as the Commission has approved Company's use of rates applicable to Qualifying Facilities (Section A.II.1 herein) in lieu of the Avoided Fuel Cost.

III. Contract. Whether or not purchases are made by Company under the standard rates, Company shall not be required to make any purchase from Customer-Generator until Company and Customer-Generator have entered into a written contract for such purchases.

IV. All provisions of this tariff are subject to all Commission rules and regulations as may be revised from time-to-time. All terms of the tariff are also subject to the Commission's normal complaint and arbitration procedures.

V. Guideline Technical Requirements for Parallel Operation with the Company's System.

1. Introduction

The minimum technical requirements for safe parallel operation of Customer-Generator's electrical generating facilities with the Company's system are set forth below. These requirements will serve as a guide for Company and Customer-Generator engineering when planning such an installation; however, it is recognized that each installation may have specific requirements other than those set forth herein as a result of each installation's unique nature.

2. General Technical RequirementsA. Protection

- (1) Customer-Generator shall install protective devices capable of detecting fault conditions on both his system and the Company's system. These devices will separate Customer-Generator's system from the Company's system either directly or through an auxiliary device such as a circuit breaker. The separating device must be capable of interrupting the available fault current. The detection sensitivity and operating speed of these devices must be compatible with protective devices on the Company's system.
- (2) The Customer-Generator shall install equipment designed to automatically separate his system from the Company's system upon loss of the normal Company supply.
- (3) The Customer-Generator is responsible for protecting Customer-Generator's equipment in such a manner that faults or other disturbances on the Company's system or on Customer-Generator's system do not cause damage to his equipment.

\*Indicates Addition.      \*\*Indicates Change.

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\*B. ELECTRIC POWER PURCHASES FROM QUALIFIED NET METERING UNITS -  
(CONTINUED)

- (4) Customer-Generator shall furnish information to Company regarding his proposed generation equipment and protective devices prior to parallel operation. Company will check the adequacy of this proposed equipment and its compatibility with protective devices on the Company's system and will either approve as submitted or specify additional equipment which will be required in order to begin parallel operation with the Company's system.
- (5) All protective relay settings that would affect any Company system relay settings will be specified by Company. These relays will be initially calibrated by Company to assure proper operation.
- (6) A manual visible disconnect switch must be provided which is under the exclusive jurisdictional control of the Company's dispatcher. This manual switch must have the capability to be locked out of service by a Company-authorized switchman.
- (7) The above statements are the basic minimum protection requirements that would be associated with parallel generation. Additional requirements and/or equipment would depend on an in-depth study of each proposed connection.

B. Operation

- (1) Under certain conditions the intertie breaker (if one is required) must be operated by Customer-Generator in order for Company to operate the manual disconnect switch. Company may request this action for any of the following reasons:
  - a. System emergency.
  - b. Inspection of Customer-Generator's generating equipment or protective equipment reveals an unsafe condition.
  - c. Customer-Generator's generating equipment interferes with other customers or with the operation of the Company's system.
  - d. An outage is scheduled on the Company's supply circuit or feeder.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 11CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 11APPLYING TO MISSOURI SERVICE AREA**\*B. ELECTRIC POWER PURCHASES FROM QUALIFIED NET METERING UNITS (CONTINUED)**

- (2) Customer-Generator shall be solely responsible for properly synchronizing his generating equipment with the Company's frequency and voltage. This includes resynchronizing his generator(s) after system outages or disturbances.

**C. Quality of Service**

- (1) The interconnection of Customer-Generator's generating equipment with the Company's system shall not cause any reduction in the quality of service being provided to other customers or cause any undesirable effect on any Company facilities. Such interconnection shall be pursuant to the latest revision of IEEE 519 and IEEE 1547.
- (2) The power factor of Customer-Generator's load with his generating equipment connected shall not be less than that specified by retail tariff for his applicable customer class.

**D. Metering and/or Additional Distribution Equipment**

The revenue metering for Net Metering shall be sufficient to measure the net amount of electrical energy produced or consumed by the Customer-Generator. If the Customer-Generator's existing meter equipment does not meet these requirements or if it is necessary for Company to install additional distribution equipment to accommodate the Customer-Generator's facility, the Customer-Generator shall reimburse the Company for the costs to purchase and install the necessary additional equipment.

At the request of the Customer-Generator, such costs may be initially paid for by Company, and any amount up to the total costs and a reasonable interest charge may be recovered from the Customer-Generator over the course of up to twelve (12) billing periods. Net Metering cannot occur until the installation of such meter(s) and/or additional distribution equipment has been completed.

\* Indicates Change.

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## UNION ELECTRIC COMPANY

## ELECTRIC SERVICE

P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 12CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 12APPLYING TO MISSOURI SERVICE AREA**\*B. ELECTRIC POWER PURCHASES FROM QUALIFIED NET METERING UNITS-(CONTINUED)****E. Other Requirements**

- (1) All Customer-Generator installations shall adhere to any applicable requirements of the National Electrical Safety Code, the National Electric Code, Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), local electric codes, applicable NEMA codes, OSHA, and Company's Electric Service Rules as set forth in published tariffs.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 13CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 13APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS****\*\*For Customers Applying for Interconnection:**

If you are interested in applying for interconnection to the electrical system of Union Electric Company d/b/a Ameren Missouri (Company), you should first contact Company and ask for information related to interconnection of parallel generation equipment to Company's system and you should understand this information before proceeding with this Application. If you wish to apply for interconnection to Company's electrical system, please complete sections A, B, C, and D, and attach complete plans, specifications, schematics and wiring diagrams describing the net metering, parallel generation, and interconnection facilities (hereinafter collectively referred to as the "Customer-Generator's System") and submit them to Company at:

One Ameren Plaza  
1901 Chouteau Avenue  
\* P.O. Box 66149, MC 611  
St. Louis MO 63103

\*\*Att: General Executive, Renewables

You will be provided with an approval or denial of this Application. Company will provide notice of approval or denial within thirty (30) days of receipt by Company for Customer-Generators of 10 kW or less and within ninety (90) days of receipt by Company for Customer-Generators greater than 10 kW. If this Application is denied, you will be provided with the reason(s) for the denial. If this Application is approved and signed by both you and Company, it shall become a binding contract and shall govern your relationship with Company.

**For Customers Who Have Received Approval of  
Customer-Generator System Plans and Specifications:**

After receiving approval of your Application, it will be necessary to construct the Customer-Generator System in compliance with the plans and specifications described in the Application, complete sections E and F of this Application, and forward this Application to Company for review and completion of section G at:

One Ameren Plaza  
1901 Chouteau Avenue  
\* P.O. Box 66149, MC 611  
St. Louis MO 63103

\*\*Att: General Executive, Renewables

Company will complete the utility portion of section G and, upon receipt of a completed Application/Agreement form and payment of any applicable fees, permit interconnection of the Customer-Generator System to Company's electrical system. Customer-Generator will have one (1) year from the time of Company's approval to complete the interconnection after which time, the approval shall expire and the Customer-Generator shall be responsible for filing a new application.

**For Customers Who Are Assuming Ownership or Operational  
Control of an Existing Customer-Generator System:**

If no changes are being made to the existing Customer-Generator System, complete sections A, D and F of this Application/Agreement and forward to Company at:

One Ameren Plaza  
1901 Chouteau Avenue  
\* P.O. Box 66149, MC 611  
St. Louis MO 63103

\*\*Att: General Executive, Renewables

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 14CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 14APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS – (CONTINUED)**

Company will review the new Application/Agreement and shall approve such if the new Customer-Generator has satisfactorily completed Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. There are no fees or charges for the Customer-Generator who is assuming ownership or operational control of an existing Customer-Generator System if no modifications are being proposed to that System.

**A. Customer-Generator's Information**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Service/Street Address (if different from above): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Emergency Contact Phone: \_\_\_\_\_

Company Account No. (from Utility Bill): \_\_\_\_\_

**\*B. Customer-Generator's System Information**

System Type/Manufacturer Name Plate Capacity:

Photovoltaic \_\_\_\_\_ Wind \_\_\_\_\_ DC Power Rating \_\_\_\_\_ kW Voltage \_\_\_\_\_ Volts

Solar/Thermal \_\_\_\_\_ Thermal \_\_\_\_\_ Fuel Cell \_\_\_\_\_ Hydroelectric \_\_\_\_\_ Other (describe) \_\_\_\_\_

(circle one) DC / AC Power Rating \_\_\_\_\_ kW Voltage \_\_\_\_\_ Volts

Service/Street Address: \_\_\_\_\_

Inverter/Interconnection Equipment Manufacturer: \_\_\_\_\_

Inverter/Interconnection Equipment Model No.: \_\_\_\_\_

Are Required System Plans &amp; Specifications Attached? Yes \_\_\_\_\_ No \_\_\_\_\_

Inverter/Interconnection Equipment Location (describe): \_\_\_\_\_

Outdoor Manual/Utility Accessible &amp; Lockable Disconnect Switch Location (describe): \_\_\_\_\_

Existing Electrical Service Capacity: \_\_\_\_\_ Amperes Voltage: \_\_\_\_\_ Volts

Service Character: Single Phase \_\_\_\_\_ Three Phase \_\_\_\_\_

\* Indicates Change.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 3rd Revised SHEET NO. 15CANCELLING SCHEDULE NO. 1 2nd Revised SHEET NO. 15APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS – (CONTINUED)****\*C. Installation Information/Hardware and Installation Compliance**

Person or Company Installing: \_\_\_\_\_

Contractor's License No. (if applicable): \_\_\_\_\_

Approximate Installation Date: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Person or Agency Who Will Inspect/Certify Installation: \_\_\_\_\_

The Customer-Generator's proposed System hardware complies with all applicable National Electrical Safety Code (NESC), National Electric Code (NEC), Institute of Electrical and Electronics Engineers (IEEE) and Underwriters Laboratories (UL) requirements for electrical equipment and their installation. As applicable to System type, these requirements include, but are not limited to, UL 1741, IEEE 929-2000 or IEEE 1547. The proposed installation also complies with all applicable local electrical codes. The proposed System has a lockable, visible disconnect device, accessible at all times to Company personnel located within the vicinity of the Customer-Generator's meter. The System is only required to include one lockable, visible disconnect device, accessible to Company. If the interconnection equipment is equipped with a visible, lockable, and accessible disconnect, no redundant device is needed to meet this requirement.

The Customer-Generator's proposed System has functioning controls to prevent voltage flicker, DC injection, overvoltage, undervoltage, overfrequency, underfrequency, and overcurrent, and to provide for System synchronization to Company's electrical system. The proposed System does have an anti-islanding function that prevents the generator from continuing to supply power when Company's electric system is not energized or operating normally. If the proposed System is designed to provide uninterruptible power to critical loads, either through energy storage or back-up generation, the proposed System includes a parallel blocking scheme for this backup source that prevents any backflow of power to Company's electrical system when the electrical system is not energized or not operating normally.

Signed (Installer): \_\_\_\_\_ Date: \_\_\_\_\_

Name (Print): \_\_\_\_\_

**D. Additional Terms and Conditions**

In addition to abiding by Company's other applicable rules and regulations, the Customer-Generator understands and agrees to the following specific terms and conditions:

**1) Operation/Disconnection**

If it appears to Company, at any time, in the reasonable exercise of its judgment, that operation of the Customer-Generator's System is adversely affecting safety, power quality or reliability of Company's electrical system, Company may immediately disconnect and lock-out the Customer-Generator's System from Company's electrical system. The Customer-Generator shall permit Company's employees and inspectors reasonable access to inspect, test, and examine the Customer-Generator's System.

\* Indicates Reissue.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 16CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 16APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS – (CONTINUED)****2) Liability**

Liability insurance is not required for Customer-Generators when the generator is 10 kW or less. For generators greater than 10 kW, the Customer-Generator agrees to carry no less than \$100,000 of liability insurance that provides for coverage of all risk of liability for personal injuries (including death) and damage to property arising out of or caused by the operation of the Customer-Generator's System. Insurance may be in the form of an existing policy or an endorsement on an existing policy.

\* Absent clear and convincing evidence of fault on the part of Company, Company cannot be held liable for any action or cause of action relating to any damages to property or person caused by the generation unit of a Customer-Generator or the interconnection thereof pursuant to section 386.890.11, RSMo Supp. 2008. A Customer-Generator may have legal liabilities not covered under their existing insurance policy in the event the Customer Generator's negligence or other wrongful conduct causes personal injury (including death), damage to property, or other actions and claims.

**3) Interconnection Costs**

The Customer-Generator shall, at the Customer-Generator's cost and expense, install, operate, maintain, repair, and inspect, and shall be fully responsible for the Customer-Generator's System. The Customer-Generator further agrees to pay or reimburse to Company all of Company's Interconnection Costs. Interconnection Costs are the reasonable costs incurred by Company for: (1) additional tests or analyses of the effects of the operation of the Customer-Generator's System on Company's local distribution system, (2) additional metering, and (3) any necessary controls. These Interconnection Costs must be related to the installation of the physical facilities necessary to permit interconnected operation of the Customer-Generator's System with Company's system and shall only include those costs, or corresponding costs, which would not have been incurred by Company in providing service to the Customer-Generator solely as a consumer of electric energy from Company pursuant to Company's standard cost of service policies in effect at the time the Customer-Generator's System is first interconnected with Company's system. Upon request, Company shall provide the Customer-Generator with a not-to-exceed costs statement for interconnection with Company based upon the plans and specifications provided by the Customer-Generator to Company.

**4) Energy Pricing and Billing**

Each billing period, Company shall measure the net electrical energy produced or consumed and bill the Customer-Generator as follows:

- a) If the electricity supplied by Company exceeds the electricity supplied by the Customer-Generator to Company, Company's bill will reflect the net electricity supplied by Company and the Customer-Generator's current service classification.
- b) If the electricity supplied by Company is less than the electricity supplied by the Customer-Generator to Company, Company's bill will include a credit for the net electricity received by Company in accordance with the Non-Time-Differentiated Energy Rates contained in Company's Schedule 1 – Electric Power Purchases, Section A.II.1.

\* Indicates Addition.

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P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 17CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 17APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS – (CONTINUED)****\*5) Terms and Termination Rights**

This Agreement becomes effective when signed by both the Customer-Generator and Company, and shall continue in effect until terminated. After fulfillment of any applicable initial tariff or rate schedule term, the Customer-Generator may terminate this Agreement at any time by giving Company at least thirty (30) days prior written notice. In such event, the Customer-Generator shall, no later than the date of termination of Agreement, completely disconnect the Customer-Generator's System from parallel operation with Company's system. Either party may terminate this Agreement by giving the other party at least thirty (30) days prior written notice that the other party is in default of any of the terms and conditions of this Agreement, so long as the notice specifies the basis for termination, and there is an opportunity to cure the default. This Agreement may also be terminated at any time by mutual agreement of the Customer-Generator and Company. This agreement may also be terminated, by approval of the Commission, if there is a change in statute that is determined to be applicable to this contract and necessitates its termination.

**\*6) Transfer of Ownership**

If operational control of the Customer-Generator's System transfers to any other party than the Customer-Generator, a new Application/Agreement must be completed by the person or persons taking over operational control of the existing Customer-Generator System. Company shall be notified no less than thirty (30) days before the Customer-Generator anticipates transfer of operational control of the Customer-Generator's System. The person or persons taking over operational control of Customer-Generator's System must file a new Application/Agreement, and must receive authorization from Company, before the existing Customer-Generator System can remain interconnected with Company's electrical system. The new Application/Agreement will only need to be completed to the extent necessary to affirm that the new person or persons having operational control of the existing Customer-Generator System completely understand the provisions of this Application/Agreement and agrees to them. If no changes are being made to the Customer-Generator's System, completing sections A, D and F of this Application/Agreement will satisfy this requirement. If no changes are being proposed to the Customer-Generator System, Company will assess no charges or fees for this transfer. Company will review the new Application/Agreement and shall approve such if the new Customer-Generator has satisfactorily completed the Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. Company will then complete section G and forward a copy of the completed Application/Agreement back to the new Customer-Generator, thereby notifying the new Customer-Generator that the new Customer-Generator is authorized to operate the existing Customer-Generator System in parallel with Company's electrical system. If any changes are planned to be made to the existing Customer-Generator System that in any way may degrade or significantly alter that System's output characteristics, then the Customer-Generator shall submit to Company a new Application/Agreement for the entire Customer-Generator System and all portions of the Application/Agreement must be completed.

**7) Dispute Resolution**

If any disagreements between the Customer-Generator and Company arise that cannot be resolved through normal negotiations between them, the disagreements may be brought to the Missouri Public Service Commission by either party, through an informal or formal complaint. Procedures for filing and processing these complaints are described in 4 CSR 240-2.070. The complaint procedures described in 4 CSR 240-2.070 apply only to retail electric power suppliers to the extent that they are regulated by the Missouri Public Service Commission.

\*Indicates Reissue.

DATE OF ISSUE October 28, 2010 DATE EFFECTIVE November 27, 2010ISSUED BY Warner L. Baxter President & CEO St. Louis, Missouri  
NAME OF OFFICER TITLE ADDRESS

P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 2nd Revised SHEET NO. 18CANCELLING SCHEDULE NO. 1 1st Revised SHEET NO. 18APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS – (CONTINUED)****\*\*8) Testing Requirement**

IEEE 1547 requires periodic testing of all interconnection related protective functions. The Customer-Generator must, at least once every year, conduct a test to confirm that the Customer-Generator's net metering unit automatically ceases to energize the output (interconnection equipment output voltage goes to zero) within two (2) seconds of being disconnected from Company's electrical system. Disconnecting the net metering unit from Company's electrical system at the visible disconnect switch and measuring the time required for the unit to cease to energize the output shall satisfy this test. The Customer-Generator shall maintain a record of the results of these tests and, upon request by Company, shall provide a copy of the test results to Company. If the Customer-Generator is unable to provide a copy of the test results upon request, Company shall notify the Customer-Generator by mail that Customer-Generator has thirty (30) days from the date the Customer-Generator receives the request to provide to Company, the results of a test. If the Customer-Generator's equipment ever fails this test, the Customer-Generator shall immediately disconnect the Customer-Generator's System from Company's system. If the Customer-Generator does not provide results of a test to Company within thirty (30) days of receiving a request from Company or the results of the test provided to Company show that the Customer-Generator's net metering unit is not functioning correctly, Company may immediately disconnect the Customer-Generator's System from Company's system. The Customer-Generator's System shall not be reconnected to Company's electrical system by the Customer-Generator until the Customer-Generator's System is repaired and operating in a normal and safe manner.

**\*9) Ownership of Renewable Energy Credits (REC's)**

All REC's created through the operation of Customer-Generator's system are owned by Customer-Generator. This contract does not grant any control or title over REC's to Company. Company is not precluded from making an offer to purchase said REC's through a separate and mutually agreed upon contract for that purpose.

I have read, understand, and accept the provisions of Section D, subsections 1 through 9 of this Application/Agreement.

Signed (Customer-Generator): \_\_\_\_\_ Date: \_\_\_\_\_

**E. Electrical Inspection**

The Customer-Generator System referenced above satisfies all requirements noted in Section C.

Inspector Name (print): \_\_\_\_\_

Inspector Certification: I am a Licensed Engineer in Missouri \_\_\_\_\_ or

I am a Licensed Electrician in Missouri \_\_\_\_\_ License No. \_\_\_\_\_

Signed (Inspector): \_\_\_\_\_ Date: \_\_\_\_\_

\*Indicates Addition.

\*\*Indicates Reissue.

DATE OF ISSUE October 28, 2010 DATE EFFECTIVE November 27, 2010

ISSUED BY Warner L. Baxter President & CEO St. Louis, Missouri  
NAME OF OFFICER TITLE ADDRESS

P. S. C. MO., ILL. C. C., IA. ST. C. C. SCHEDULE NO. 1 Original SHEET NO. 19

CANCELLING SCHEDULE NO. \_\_\_\_\_ SHEET NO. \_\_\_\_\_

APPLYING TO MISSOURI SERVICE AREA**INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH  
CAPACITY OF 100 kW OR LESS – (CONTINUED)****\*F. Customer-Generator Acknowledgement**

I am aware of the Customer-Generator System installed on my premises and I have been given warranty information and/or an operational manual for that system. Also, I have been provided with a copy of Company's parallel generation tariff or rate schedule (as applicable) and interconnection requirements. I am familiar with the operation of the Customer-Generator System.

I agree to abide by the terms of this Application/Agreement and I agree to operate and maintain the Customer-Generator System in accordance with the manufacturer's recommended practices, the provisions of IEEE Standard 1547 and the Company's interconnection standards. If, at any time and for any reason, I believe that the Customer-Generator System is operating in an unusual manner that may result in any disturbances on Company's electrical system, I shall disconnect the Customer-Generator System and not reconnect it to Company's electrical system until the Customer-Generator System is operating normally after repair or inspection. Further, I agree to notify Company no less than thirty (30) days prior to modification of the components or design of the Customer-Generator System that in any way may degrade or significantly alter that System's output characteristics. I acknowledge that any such modifications will require submission of a new Application/Agreement to Company.

I agree not to operate the Customer-Generator System in parallel with Company's electrical system until this Application/Agreement has been approved by Company.

Signed (Customer-Generator): \_\_\_\_\_ Date: \_\_\_\_\_

**\*G. Application Approval (completed by Company)**

Company does not, by approval of this Application/Agreement, assume any responsibility or liability for damage to property or physical injury to persons due to malfunction of the Customer-Generator's System or the Customer-Generator's negligence.

This Application is approved by Company on this \_\_\_\_\_ day of \_\_\_\_\_ (month), \_\_\_\_\_ (year).

Company Representative Name (print): \_\_\_\_\_

Signed Company Representative: \_\_\_\_\_

\*Indicates Reissue.

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NAME OF OFFICER TITLE ADDRESS