

Rolla Municipal Utilities

## **INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH CAPACITY OF 100 kW DC OR LESS**

### **For Customers Applying for Interconnection**

If you are interested in applying for interconnection to Rolla Municipal Utilities' electrical system, you should first contact Rolla Municipal Utilities and ask for information related to interconnection of parallel generation equipment to Rolla Municipal Utilities' system. You should be aware that this program is available on a first-come, first served basis for installations with a capacity of not more than 100 kilowatts Direct Current (DC), and that there can be a limit on the total rated capacity of systems allowed to connect to RMU, so connection is not guaranteed. You should understand this information before proceeding with this Application. If you wish to apply for interconnection to Rolla Municipal Utilities' electrical system, please complete sections A, B, C, and D, and attach the plans and specifications describing the net metering, parallel generation, and interconnection facilities (hereinafter collectively referred to as the "Customer-Generator System") and submit them to Rolla Municipal Utilities (hereinafter referred to as "RMU") at:

Rolla Municipal Utilities  
Attn: Engineering Department  
P.O. Box 767  
102 W. 9<sup>th</sup> Street  
Rolla, MO 65402-0767

You (hereinafter referred to as "Customer") will be provided with an approval or denial of this Application within thirty (30) days of receipt by RMU in the case of systems ten (10) kilowatts DC or less, and within ninety (90) days of receipt by RMU for all other systems. If this Application is denied, the Customer will be provided with the reason(s) for the denial. If this Application is approved and signed by both the Customer and RMU, it shall become a binding contract and shall govern the Customer's relationship with RMU.

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

After receiving approval of the Customer's 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 RMU for review and completion of section G at:

Rolla Municipal Utilities  
Attn: Engineering Department  
P.O. Box 767  
102 W. 9<sup>th</sup> Street  
Rolla, MO 65402-0767

RMU 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 RMU's electrical system within fifteen (15) days of receipt by RMU if electric service already exists to the premises, unless the Customer and RMU agree to a later date. Similarly, upon receipt of a completed Application/Agreement form and payment of any applicable fees, if electric service does not exist to the premises, RMU will permit interconnection of the Customer-Generator System to RMU's electrical system no later than fifteen(15) days after service is established to the premises, unless the Customer and RMU agree to a later date.

### **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 RMU at:

Rolla Municipal Utilities  
Attn: Engineering Department  
P.O. Box 767  
102 W. 9<sup>th</sup> Street  
Rolla, MO 65402-0767

RMU will review the new Application/Agreement and shall approve such, within fifteen (15) days of receipt by RMU if the new Customer has satisfactorily completed the Application/Agreement, and no changes are being proposed to the

existing Customer-Generator System. There are no fees or charges for the Customer who is assuming ownership or operational control of an existing Customer-Generator System if no modifications are being proposed to that System.

**A. CUSTOMER 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 24 Hour Contact Phone: \_\_\_\_\_  
Customer's Account No. (from RMU Utility Bill): \_\_\_\_\_

**B. CUSTOMER-GENERATOR SYSTEM INFORMATION**

Manufacturer Name Plate (if applicable) DC Power Rating: \_\_\_\_\_ kW, Voltage \_\_\_\_\_ Volts  
System Type: Solar\_\_ Wind\_\_ Biomass\_\_ Fuel Cell\_\_ Other (describe) \_\_\_\_\_  
Service/Street Address: \_\_\_\_\_  
Inverter/Interconnection Equipment Manufacturer: \_\_\_\_\_  
Inverter/Interconnection Equipment Model No.: \_\_\_\_\_  
Are Required System Plans & Specifications Attached? Yes\_\_ No\_\_  
Inverter/Interconnection Equipment Location (describe): \_\_\_\_\_  
\_\_\_\_\_  
Outdoor Manual/Utility Accessible & Lockable Disconnect Switch Location (describe): \_\_\_\_\_  
\_\_\_\_\_  
Existing Electrical Service Capacity: \_\_\_\_\_ Amperes Voltage: \_\_\_\_\_ Volts  
Service Character: Single Phase \_\_ Three Phase \_\_

**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'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 and IEEE 1547. The proposed installation complies with all applicable local electrical codes and all safety requirements of RMU. The proposed system has a lockable, visible disconnect device, accessible at all times to RMU personnel. The system is only required to include one lockable, visible disconnect device, accessible to RMU. If the interconnection equipment is equipped with a visible, lockable, and accessible disconnect, no redundant device is needed to meet this requirement. However, RMU requests a breaker or disconnect on the load side of the meter to accommodate future meter maintenance.

The Customer'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 RMU's electrical system. The proposed system does have an anti-islanding function that prevents the generator from continuing to supply power when RMU'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 RMU's electrical system when the electrical system is not energized or not operating normally.

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

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

#### **D. ADDITIONAL TERMS & CONDITIONS**

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

##### **1. Operation/Disconnection**

If it appears to RMU, at any time, in the reasonable exercise of its judgment, that operation of the Customer-Generator System is adversely affecting or could adversely affect the safety, power quality or reliability of the RMU electrical system, RMU may immediately disconnect and lock-out the Customer-Generator System from RMU's electrical system. The Customer shall permit RMU employees and inspectors reasonable access to inspect, test, and examine the Customer-Generator System. If RMU determines that there is an actual or potential defect or improper arrangement in the Customer-Generator System, RMU shall inform the Customer of the particulars. If the Customer makes repairs or changes to the satisfaction of RMU, the Customer-Generator System shall be reconnected to the RMU system.

##### **2. Liability**

For Customer-Generator systems rated less than 10kW DC, the Customers shall not be required to purchase liability insurance. For Customer-Generator systems rated 10 kW DC and higher, the Customer agrees to carry no less than \$1,000,000/\$3,000,000 (Each Person/ Combined single limit per Occurrence) 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 System. This insurance is required to be in effect at all times the Customer-Generator System is capable of producing electricity, whether it is electrically connected to the RMU system or not. Notification to RMU of the cancellation of any such insurance policy is required. Insurance may be in the form of an existing policy or an endorsement on an existing policy, or proof satisfactory to RMU that the Customer is self-insured for at least that amount. Rolla Municipal Utilities/City of Rolla, its officers, boards, commissions, agents, and employees shall be named as Additional Insureds on such insurance policy. Except in the case of self-insurance, the Customer shall provide a Certificate of Insurance, with the coverage as stated in this agreement, and any Endorsements that apply.

##### **3. Interconnection Costs**

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

##### **4. Energy Pricing and Billing**

Section 386.890, RSMo Supp. 2007 sets forth the net electrical energy measurement requirements for Customer-Generator Systems. RMU shall measure the net electrical energy produced or consumed during the billing period in accordance with normal metering practices for customers in the same RMU rate class, either by employing a single, bidirectional meter or multiple meters that separately measure consumption and production by the Customer. If the electricity supplied by RMU exceeds that generated by the Customer during a billing period, RMU shall bill Customer

for the net supplied by RMU in the same manner as other customers in the same RMU rate class. If the electricity generated by the Customer exceeds that supplied by RMU during a billing period, Customer shall be billed for the appropriate customer charges for that billing period and shall be credited an amount at least equal to the avoided fuel cost of the excess kilowatt-hours generated during the billing period, with this credit applied to the following billing period. Any such credits shall expire without any compensation at the earlier of either twelve (12) months after their issuance or when the Customer disconnects service or terminates the net metering relationship with RMU. Avoided fuel cost for these purposes shall be calculated based on the avoided energy cost from RMU's wholesale energy provider. Billing disputes, estimated readings, or instances of meter error or malfunction and other similar matters shall be governed by RMU's General Rules and Regulations.

#### **5. Terms and Termination Rights**

This Agreement becomes effective when signed by both the Customer and RMU, and shall continue in effect until terminated. After fulfillment of any applicable initial tariff or rate schedule term, the Customer may terminate this Agreement at any time by giving RMU at least thirty (30) days prior written notice. In such event, the Customer shall, no later than the date of termination of Agreement, completely disconnect the Customer-Generator System from parallel operation with RMU'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 and RMU. This Agreement may also be terminated, 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 System transfers to any other party than the Customer, a new Application/Agreement must be completed by the person or persons taking over operational control of the existing Customer-Generator System. RMU shall be notified no less than thirty (30) days before the Customer anticipates transfer of operational control of the Customer-Generator System. The person or persons taking over operational control of Customer-Generator System must file a new Application/Agreement, and must receive authorization from RMU, before the existing Customer-Generator System can remain interconnected with RMU'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 provision of this Application/Agreement and agree to them. If no changes are being made to the Customer-Generator System, completing sections A, D and F of the Application/Agreement will satisfy this requirement. If no changes are being proposed to the Customer-Generator System, RMU will assess no charges or fees for this transfer. RMU will review the new Application/Agreement and shall approve such, within fifteen (15) days if the new Customer has satisfactorily completed the Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. RMU will then complete section G and forward a copy of the completed Application/Agreement back to the new Customer, thereby notifying the new Customer that the new Customer is authorized to operate the existing Customer-Generator System in parallel with RMU'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 new Customer shall submit to RMU a new Application/Agreement for the entire Customer-Generator System and all portions of the Application/Agreement must be completed.

#### **7. Metering and Distribution Costs**

The Customer-Generator System shall be equipped with sufficient metering equipment that is capable of measuring the net amount of electrical energy produced or consumed by the Customer. If the Customer's existing meter equipment does not meet these requirements or if it is necessary for RMU to install additional distribution equipment to accommodate the Customer-Generator System, the Customer shall reimburse RMU for the cost to purchase and install the necessary additional equipment. Any subsequent meter testing, maintenance or meter equipment change necessitated by either the Customer-Generator System or Customer shall be paid for by the Customer.

#### **8. Testing Requirement**

The Customer must, at least once every year in accordance with IEEE 1547, conduct a test of all interconnection-related protective functions and confirm that the Customer'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 RMU's electrical system. Disconnecting the net metering unit from RMU'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 shall maintain a record of the results of these tests and, upon request by RMU, shall provide a copy of the test results to RMU. If the Customer is unable to provide a copy of the test results upon request, RMU shall notify the Customer by mail that Customer has thirty (30) days from the date the Customer receives the request, to provide to RMU the results of a test. If the Customer's equipment ever fails this test, the Customer shall immediately disconnect the Customer-Generator System from RMU's system. If the Customer does not provide results of a test to RMU within thirty (30) days of receiving a request from RMU or the results of the test provided to RMU show that the Customer's net metering unit is not functioning correctly, RMU may immediately disconnect the Customer-Generator System from RMU's system. The Customer-Generator System shall not be reconnected to RMU's electrical system by the Customer until the Customer-Generator System is repaired and operating in a normal and safe manner.

The Customer has read, understands, and accepts the provisions of section D, subsections 1 through 8 of this Application/Agreement.

Customer's Name (print): \_\_\_\_\_ Date: \_\_\_\_\_

Customer's Signature: \_\_\_\_\_

**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: \_\_\_\_\_

**F. CUSTOMER ACKNOWLEDGMENT**

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

The Customer agrees to abide by the terms of this Application/Agreement and RMU's General Rules and Regulations that may apply, and the Customer agrees to operate and maintain the Customer-Generator System in accordance with the manufacturer's recommended practices as well as RMU's interconnection standards. If, at any time and for any reason, the Customer believes that the Customer-Generator System is operating in an unusual manner that may result in any disturbances on RMU's electrical system, the Customer shall disconnect the Customer-Generator System and not reconnect it to RMU's electrical system until the Customer-Generator System is operating normally after repair or inspection. Further, the Customer agrees to notify RMU 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 the Customer-Generator System output characteristics. The Customer acknowledges that any such modification(s) will require submission of a new Application/Agreement to RMU.

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

By signing this document, if the Customer is an entity legally capable of complying with the following, the Customer agrees to protect, indemnify, save and keep harmless Rolla Municipal Utilities (RMU) & City of Rolla against and from any and all loss, cost, damage or expense, arising out of or from any accident or other occurrence on or about said premises, causing injury to any person or property whomsoever and whatsoever and will protect, indemnify and save and

keep harmless RMU & City of Rolla from any and all claims, costs or expense arising out of any failure in any respect to comply with and perform all the requirements and provisions agreed to and required by any law or ordinance, or the Interconnection Agreement for Net Metering, in regards to the \_\_\_\_\_, at this/these location(s): \_\_\_\_\_.

If RMU determines that the Customer is not legally capable of providing this indemnification, this box will be checked by RMU:

**Please print -**

Customer's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Customer's Title, if applicable: \_\_\_\_\_

Customer's Signature: \_\_\_\_\_

**G. UTILITY APPLICATION APPROVAL (completed by RMU)**

RMU 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 System or the Customer's negligence.

This Application is approved by Rolla Municipal Utilities on this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Rolla Municipal Utilities Representative (print): \_\_\_\_\_

Signature of RMU's Representative: \_\_\_\_\_