

**APPENDIX C**  
**TRAVERSE CITY LIGHT AND POWER**  
**RENEWABLE NET METERING AGREEMENT**

**TRAVERSE CITY LIGHT AND POWER**  
**RENEWABLE NET METERING AGREEMENT**

FOR CUSTOMER-GENERATOR SYSTEMS

THIS RENEWABLE NET METERING AGREEMENT (the “Agreement”), is made as of this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by and between Traverse City Light and Power Department, (the “Utility”) and \_\_\_\_\_, (“Customer-Generator”) for service at \_\_\_\_\_.

\_\_\_\_\_. The Utility and the Customer-Generator are sometimes referred to herein individually as “Party” and collectively as the “Parties.”

**RECITALS**

- A. The Utility is a municipal utility engaged in the generation, sale and distribution of electric energy, pursuant to the Utility’s Policies and procedures, and availability of Rates.
- B. Customer-Generator receives electrical service from the Utility at rates contained in the Utility’s rate tariff sheets and desires to obtain service from the Utility under its available Rates and Net Metering Policy.
- C. Customer-Generator will be installing and desires to operate in-parallel with the Utility’s electric system, from and after the date of this Agreement, certain electrical equipment at the above location, consisting of:  
\_\_\_\_\_ and related facilities and equipment having an aggregate generation of \_\_\_\_ kilowatts using only a renewable fuel or energy source (“Generating Facility”), for the purpose of offsetting part, or all, of the Customer-Generator’s electric service requirements.
- D. It is anticipated that the Generating Facility may, from time-to-time, generate less than all of the Customer-Generator’s electrical requirements at the Generating Facility location. The Generating Facility may, from time-to-time, generate energy in excess of the Customer-Generator’s electrical requirements at the Generating Facility location.
- E. The Generating Facility and the Utility’s electric system will be interconnected at one meter location indicated in the Net Metering Policy and Renewable Net Metering Agreement.
- F. Acceptable forms of generation shall be limited to renewable inverter type generation using a renewable energy source of either wind or solar and not fossil fuels such as oil, gasoline, or natural gas.
- G. All net metering projects shall be located on property owned and occupied by the applicant.

## **AGREEMENT**

NOW, THEREFORE, for and in consideration of the mutual benefits to be derived therefrom, the Utility and Customer-Generator agree as follows:

### **1 Service Under Available Rates**

Customer-Generator has or will be receiving service from the Utility pursuant to the Utility's Policies and procedures, and available Rates, and will continue to receive such service pursuant to their terms and conditions as may be amended by the Utility, and pursuant to the terms and conditions of this Agreement.

### **2 Parallel Operation**

Customer-Generator shall, pursuant and subject to the Utility's Rates, Net Metering Policy, and this Agreement between Customer-Generator and Utility, deliver into the Utility's electric system all energy generated by the Generating Facility in excess of Customer-Generator's electrical requirements.

The Customer-Generator shall secure and maintain all necessary certificates and permits from municipal or other public authorities and comply with all national, state, and municipal laws, ordinances, and regulations as may be required.

The Utility shall install a bi-directional meter capable of registering the flow of energy in both directions. An additional monthly meter service fee of \$\_\_\_\_\_ will be charged to the Customer-Generator. The Utility shall own, operate and maintain all required billing metering equipment.

The Customer-Generator assumes all liability and agrees that the Utility has no liability for damage to the Generating Facility or other Customer or third party owned property on its side of the point of connection.

### **3 Aggregate Size Limitation on Generating Facility**

The purpose of this Agreement is to set the provisions by which Customer-Generator may install renewable generating equipment intended primarily to offset all or a portion of the Customer-Generator load at a given location. The Customer-Generator is limited by this Agreement to installing generating equipment not to exceed 80% of the annual calculated or metered electrical need of the Customer-Generator. The generating Facility may not exceed a total nameplate capacity of 20 kW.

Upon receiving an application from the Customer-Generator, the Utility will determine the maximum allowable total nameplate capacity of the Generating Facility. The Customer-Generator is required to pay a non-refundable \$100 application fee.

The Customer-Generator requirements for electricity shall be determined by one of the following methods:

- 3.1 The Customer-Generator annual energy usage, measured in kWh, during the previous 12-month period.
- 3.2 When metered demand is available, the maximum integrated hourly demand measured in kW during the previous 12-month period.
- 3.3 In instances where the complete and correct data is not available or where the Customer-Generator makes changes on-site that will affect total usage, the Customer-Generator and the Utility shall mutually agree on a method to determine the customer's electric requirements for electricity.

A Customer-Generator shall be considered to be in violation of this Agreement and the Net Metering Policy if the Customer-Generator installs a generating facility with a nameplate capacity greater than that which was approved by the Utility. All agreements shall immediately be void and the project must be suspended or the customer may have this Agreement terminated until the violation is corrected and approved by the Utility.

Any renewable credits shall be owned by the Customer-Generator.

#### **4 Delivery of Excess Energy Generated by the Generating Facility**

- 4.1 Customer-Generator shall deliver into the Utility's electric system at the Point of Common Connection all excess electric energy generated by the Generating Facility.

The "Point of Common Connection" is the location where the Utility's electric system is interconnected with the Generating Facility. Such excess electric energy shall be delivered in the form of \_\_\_\_\_ phase, sixty hertz, and alternating current at \_\_\_\_\_ volts. In no event shall Customer-Generator deliver into the Utility's electric system electric energy at more than five percent (5%) above or five percent (5%) below such voltage.

- 4.2 Net Energy Billing Terms and Conditions
  - (a) The Utility shall measure the net electricity produced or consumed by the Customer-Generator during each billing period, in accordance with normal metering practices
  - (b) If the electricity supplied by the Utility exceeds the electricity generated by the Customer-Generator during the billing period, or any portion thereof, then the Customer-Generator shall be billed at the rate under which the Customer-Generator takes service for the net electricity supplied by the Utility. In addition, the Customer-Generator shall be billed the appropriate customer charge paid by other customers in the same electrical tariff rate class for each meter and any other charges, such as demand and reactive power charges and other charges applicable to energy use and applicable adjusting rates.

- (c) If the electricity generated by the Customer-Generator during the billing period, or any portion thereof, exceeds the electricity supplied by the Utility, then the Customer-Generator shall be:
  - i. billed for the appropriate customer charge as other customers in the same electrical tariff rate class for each meter and any other charges, such as demand and reactive power charges and any applicable adjusting rates; and
  - ii. be credited for the net excess kilowatt-hours generated during the billing period. The kilowatt-hour credit will be used to offset future consumption with the consumption credit not to be carried forward more than 12 monthly billing cycles.
- (d) Customer-Generator shall pay any amount owing for electric service provided by the Utility in accordance with applicable Rates and Policies. Nothing in this Agreement shall limit the Utility's rights under applicable Rate schedules and Policies.
- (e) Any unused energy (kWh) credits accumulated by the Customer-Generator during a continuous twelve month period shall be granted to the Utility without any compensation to the Customer-Generator on the first billing cycle in April of each year.

## **5 Interruption**

- 5.1 At any time, and from time-to-time, the Utility may disconnect its electric system from the Generating Facility or may interrupt or reduce the flow of energy to or from the Generating Facility if, in the Utility's sole determination, the Generating Facility is not in compliance with this Agreement.
- 5.2 At any time, and from time-to-time, the Utility may disconnect its electric system from the Generating Facility or may interrupt or reduce the flow of energy to or from the Generating Facility if, in the Utility's sole determination, failure to do so
  - (a) would interfere with, endanger or adversely affect the Utility's electric system or operations,
  - (b) would endanger any person or the property of the Utility, the Customer-Generator, or any third party, or
  - (c) would be unsafe or contrary to prudent electrical practices.

For the purposes of this Agreement "prudent electrical practices" means (a) those practices, methods and acts which when engaged in are commonly used in prudent utility engineering and operations to operate electric equipment lawfully and with safety, reliability, efficiency and expedition; or (b) if no such practices, methods and acts exist, then those practices, methods and acts which, in the exercise of reasonable

judgment considering the facts with applicable law, safety, reliability, efficiency and expedition.

Prudent electrical practices are not limited to the optimum practice, method or act, but rather is a spectrum of possible practices, methods or acts.

- 5.3 Utility shall not be obligated to continue the interconnection to the Generating Facility if any one or more of the following conditions exist, including but not limited to: (a) those conditions listed in Attachment A – Requirements For Renewable Inverter Type Generation, Interconnection and Operation, (b) the electrical characteristics of the Generating Facility are not compatible with the electrical characteristics of Utility's distribution system, (c) the Customer-Generator is deficient in following either the voltage schedule or reactive power schedule established by Utility, (d) an emergency condition exists on Utility's distribution system, (e) Customer-Generator's protective relay equipment fails, resulting in a lack of the level of protection required by prudent utility practice, (f) the Customer-Generator's Generating Facility is determined to be disrupting Utility customers or (g) Utility requires disconnecting the Generating Facility in order to construct, install, maintain, repair, replace, remove, investigate, inspect or test any part of Utility's Interconnection Facilities or any other Utility equipment associated with the interconnection (also if a required component (example: phone line) or required modification to allow interconnection fails or becomes incapacitated and is not repaired in a timely manner). Utility shall electrically connect or reconnect its distribution system to the Generating Facility when, in Utility' sole opinion, the conditions named above cease to exist.
- 5.4 Unless caused by the sole negligence or intentional wrongdoing of the Utility, the Utility shall have no liability (whether arising in contract, tort, strict liability, warranty or otherwise) for any loss or damage whatsoever arising out of any action taken by the Utility pursuant to this Section and Customer-Generator hereby releases the Utility from such liability. Unless caused by the sole negligence or intentional wrongdoing of the Utility, Customer-Generator shall not be entitled to any monetary compensation, financial reimbursement, or claim (whether arising in contract, tort, strict liability, warranty or otherwise) for any interruption of service, loss of generation, or any other loss or damage whatsoever arising out of any action taken by the Utility pursuant to this Section and Customer-Generator hereby releases the Utility from such compensation, reimbursement, or claim.

## **6 Term and Termination**

- 6.1 This Agreement is effective upon execution the day and year first above written. Continued service under this Agreement is contingent upon the availability under the Utility's Net Metering Policy.
- 6.2 Either party may disconnect the Generating Facility at any time upon thirty (30) days written notice to the other party and this Agreement shall terminate upon permanent physical removal of facilities necessary to interconnect the Generating Facility with the Utility's electric system; provided that all obligations incurred before the termination of this Agreement shall survive such termination and continue in full force and effect until fully satisfied.
- 6.3 Under no circumstances shall the output from a Generating Facility be sold to a third party, credited to a third party, or any other Utility customer.
- 6.4 This Agreement shall immediately terminate if the Customer-Generator has not started construction by \_\_\_\_\_, \_\_\_\_, 20\_\_ or Generating Facility has not been inspected, tested, and approved by Utility by \_\_\_\_\_, \_\_\_\_, 20\_\_. In either instance Utility shall notify Customer-Generator in writing of the automatic termination. Utility shall not be liable for any expenses incurred by Customer-Generator as a result of the termination.

## **7 Governmental Authority**

Customer-Generator shall obtain all governmental authorizations, licenses and permits needed for the construction and operation of the Generating Facility.

The Customer-Generator shall secure and maintain all necessary certificates and permits from municipal or other public authorities and comply with all national, state, and municipal laws, ordinances, and regulations as may be required.

## **8 Requirements for Generation, Interconnection and Operation**

Customer-Generator shall comply with the Requirements for Renewable Inverter Type Generation, Interconnection and Operation (herein referred to as Requirements) as shown on Attachment A (Found in Appendix D) attached hereto and incorporated here by reference.

## **9 Information**

Customer-Generator represents that all information in its application or submitted in connection with that application is true. Customer-Generator shall promptly furnish the Utility with copies of such plans, specifications, records, and other information relating to the Generating Facility or the ownership, operation, use, or maintenance of the Generating Facility, as may be reasonably requested by the Utility from time-to-time. All such information, together with any and all other

documents and information furnished to the Utility under this Agreement shall be given to the Utility on a non-confidential basis.

**10 Notices and Other Communications**

All notices, requests, demands and other communications required or permitted to be given under this Agreement shall be given in writing (i) by personal delivery, (ii) by recognized overnight air courier service, (iii) by United States postal service, postage prepaid, registered or certified mail, return receipt requested. All notices to either Party shall be made to the address set forth below. Any notice shall be deemed to have been given on the date delivered, if delivered personally, by overnight air courier service, or, if mailed, shall be deemed to have been given on the date shown on the return receipt as the date of delivery.

Addresses for Notification. If to:

Utility:

Traverse City Light and Power  
Attn: Engineering Department  
1131 Hastings Street  
Traverse City, MI 49686

Tel. (231) 922-4940  
FAX (231) 922-4638

Customer-Generator:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attn: \_\_\_\_\_

Tel. ( ) \_\_\_\_\_

FAX ( ) \_\_\_\_\_

**11 Dispute Resolution**

If any party has a dispute with another regarding the meaning, operation, or enforcement of any provision of this Agreement, the disputing parties agree to meet and confer to negotiate a resolution of the dispute. If they are unable to resolve the dispute themselves and before formally instituting any other dispute mechanism, they shall utilize the services of a mutually acceptable neutral mediator, who meets the qualifications of MCR 2.411, to bring them together in at least one mediation session. All meetings, hearings and actions to resolve the dispute shall be in Grand Traverse County.

**12 Utility Policies and Rates**

This Agreement is subject to all Utility Policies, including the Net Metering Policy, the availability of Rates, and any other general rules and provisions as set forth by the Utility that may apply. Such practices, policies, procedures, programs, or rates may be revised from time-to-time upon approval of the Utility's Board. Any conflict between this Agreement and any provisions of the

Utility's approved rate schedules shall be resolved in favor of such rate schedule provisions. Terms defined in the Utility's rates, practices policies or procedures shall have the same meaning when used in this Agreement unless the usage clearly indicates otherwise.

**13 Assignment**

This Agreement and all of the terms and provisions of this Agreement shall be binding upon and inure to the benefit of the respective successors and assigns of the Parties; provided, that Customer-Generator shall not assign all or any part of this Agreement (or assign any of its rights under this Agreement or delegate performance of any of its obligations under this Agreement) without prior written consent of the Utility.

**14 Subcontractors**

Either Party may hire a subcontractor to perform its obligations under this Agreement. However, each Party shall require its subcontractors to abide by the terms of this Agreement. Each Party shall remain primarily liable to the other Party for the performance of such subcontractor. Hiring a subcontractor does not release either Party from any of its obligations.

**15 Independent Contractor**

Customer-Generator shall be and act as an independent contractor (and not as an employee, partner, agent, or representative of the Utility) in the performance of this Agreement.

**16 Governing Law**

This Agreement shall in all respects be interpreted, construed and enforced in accordance with the laws of the State of Michigan (without regard to any conflict of law rules).

**17 Survival of Terms**

All obligations of the Parties arising pursuant to this Agreement which may reasonably be construed as surviving the completion, termination, or cancellation, shall survive the completion, termination, or cancellation of this Agreement and shall be and remain fully enforceable in accordance with the terms and conditions of this Agreement.

**18 No Partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties or to impose any partnership obligations or liability upon either of the Parties.

**19 No Third Party Beneficiaries**

This Contract is intended for the benefit of the parties hereto and does not grant any rights to any third parties unless otherwise specifically stated herein.

**20 Entire Agreement**

Except as otherwise provided herein, this Agreement, including all attachments and exhibits hereto, and including all documents referenced herein, sets forth the entire agreement between the Parties. This Agreement may not be modified or amended except by written amendment, signed by both Parties hereto.

**21 Force Majeure**

Neither Party shall be considered to be in Default with respect to any obligation hereunder other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

**22 Indemnity**

The Customer-Generator at all times assume all liability for its own acts and property, and shall indemnify and save the Utility harmless from, any and all damages, losses, claims, demands, suits, recoveries, costs, legal fees, and expenses for injury to or death of any person or persons whomsoever, or for any loss, destruction of or damage to any property of third persons, firms, corporations or other entities, including environmental harm or damage arising out of or resulting from, either directly or indirectly, the acts of the Customer-Generator or the Generating Facility. The provisions of this Section shall survive termination or expiration of this Agreement.

**23 Limitation on Liability**

NEITHER PARTY SHALL IN ANY EVENT BE LIABLE TO THE OTHER FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, LOST PROFITS, REVENUE OR GOOD WILL, INTEREST, LOSS BY REASON OF SHUTDOWN OR NON-OPERATION OF EQUIPMENT OR MACHINERY, INCREASED EXPENSE OF OPERATION OF EQUIPMENT OR MACHINERY, COST OF PURCHASED OR REPLACEMENT POWER OR SERVICES OR CLAIMS BY CUSTOMERS, WHETHER SUCH LOSS IS BASED ON CONTRACT, WARRANTY,

NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, EVEN IF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

**24 Effective Date**

The Effective Date of this Agreement shall be the date of execution and shall continue in effect until this Agreement is terminated as provided herein.

**25 Retirement**

Upon termination of this Agreement or at such time after any of the Interconnection Facilities described herein are no longer required, then the Interconnection Facilities shall be retired. Retirement of said Interconnection Facilities may include without limitation (i) dismantling, demolition, and removal of equipment, facilities, and structures, (ii) security, (iii) maintenance and (iv) disposing of debris. The cost of such removal shall be borne by the Party owning such Interconnection Facilities.

**26 Breach and Default**

A breach of this Agreement (“Breach”) shall occur upon the failure of a Party to perform or observe any material term or condition of this Agreement. A default of this Agreement (“Default”) shall occur upon the failure of a Party in Breach of this Agreement to cure such Breach. Examples of Default include, but are not limited to:

- a. Failure to pay money when due;
- b. Failure to comply with any material term or condition of this Agreement, including but not limited to any material Breach of a representation, warranty or covenant made in this Agreement;
- c. A Party: (a) becomes insolvent; (b) files a voluntary petition in bankruptcy under any provision of any federal or state bankruptcy law or shall consent to the filing of any bankruptcy or reorganization petition against it under any similar law; (c) makes a general assignment for the benefit of its creditors or (d) consents to the appointment of a receiver, trustee, or liquidator;
- d. Assignment of this Agreement in a manner inconsistent with the terms of this Agreement;
- e. Failure of either Party to provide such access rights, or a Party’s attempt to revoke or terminate such access rights, as provided under this Agreement;
- f. Failure of either Party to provide information or data to the other Party as required under this Agreement provided the Party entitled to the information or data under this Agreement requires such information or data to satisfy its obligations under this Agreement.

In the event of a Breach or Default by either Party, the Parties shall continue to operate and maintain, as applicable, its Interconnection Facilities, including but not limited to: protection and metering equipment, transformers, communication equipment, building facilities, software, documentation, structural components and other facilities and appurtenances that are reasonably necessary for Utility

to operate and maintain its distribution system and for the Customer-Generator to operate and maintain its Generating Facility in a safe and reliable manner. Upon a Default, the non-defaulting Party shall give written notice of such Default to the defaulting Party. The defaulting Party then has 30 days to cure the Default. If a Default is not cured within the period provided for herein or as agreed to by the Parties, the non-defaulting Party shall have the right to terminate this Agreement by written notice and shall be relieved of any further obligations hereunder. Further, in the event of such termination, the non-defaulting Party shall be entitled to recover from the defaulting Party all amounts due hereunder, all other damages and remedies to which it is entitled at law or in equity and costs including actual attorney fees. The provisions of this Section shall survive termination of this Agreement.

**29 Severability**

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other governmental authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

**30 Electronic Documents**

After the Agreement has been duly signed, delivered and received, by either party to the other party by means of telecopy (fax) transmission or attached to an email (or similar electronic transmission) in an unalterable image format, the Agreement shall be considered as validly delivered as the physical delivery of the signed Agreement in paper form. In addition, it is further understood that this Agreement may be imaged and stored electronically and introduced as evidence in any proceeding as if an original business record; and neither party will object to the admissibility of such an image as evidence in any proceeding on account of having been stored electronically.

Utility  
 Traverse City Light and Power Department

Customer-Generator  
 \_\_\_\_\_

By: \_\_\_\_\_  
 Edward E. Rice, P.E.

By \_\_\_\_\_

Its: Executive Director

Its \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

**APPENDIX D**  
**REQUIREMENTS FOR RENEWABLE INVERTER TYPE**  
**GENERATION, INTERCONNECTION & OPERATION**  
**(Attachment A to the Renewable Net Metering Agreement)**

**ATTACHMENT A**  
**REQUIREMENTS FOR RENEWABLE INVERTER TYPE**  
**GENERATION, INTERCONNECTION & OPERATION**

The following are further REQUIREMENTS FOR RENEWABLE INVERTER TYPE GENERATION, INTERCONNECTION & OPERATION (hereinafter Requirements):

- 1 Request for Service:** The Customer-Generator has requested to interconnect and operate in parallel a generation plant with aggregate generation as indicated in the Agreement to the Utility's distribution system. In order to provide said interconnection, it may be necessary for Utility to install certain Interconnection Facilities of which the general location and type of facilities are depicted in Exhibit 1 - Interconnection Diagram. Exhibit 1 shall also define the design and physical construction of all the Interconnection Facilities of which the Customer/Generator shall solely bear the costs.
- 2 Site Preparation/Access:** At its own expense, the Customer-Generator shall make the proposed Generating Facility site available to Utility. Said site shall be free from hazard and shall be adequate for the operation and construction of the Interconnection Facilities necessary to connect the proposed Generating Facility. Utility, its agents and employees, shall have full right and authority of ingress and egress at all reasonable times on and across the premises of the Generating Facility for the purpose of installing, operating, maintaining, inspecting, replacing, repairing, and removing its Interconnection Facilities located on the premises. The right of ingress and egress, however, shall not unreasonably interfere with Customer-Generator's use of its premises.
- 3 Easements/Permits:** If necessary, prior to the installation of the Interconnection Facilities and anytime thereafter, Utility will acquire required permits and necessary easements for its Interconnection Facilities. These easements / permits may include, but shall not be limited to, easements to clear trees, and necessary rights-of-way for installation and maintenance of its Interconnection Facilities. The Customer-Generator shall reimburse Utility for its costs and expenses for acquiring such easements / permits.
- 4 Parallel Operation:** It is understood that the Generating Facility will normally remain connected to and be operated in parallel with the Utility's distribution system. The Customer-Generator shall, at its expense, install and properly maintain protective equipment and devices and provide sufficiently trained personnel to protect its equipment and service, and the equipment and service of Utility from damage, injury or interruptions during the Generating Facility's parallel operation with Utility's distribution system, and, without limiting the indemnity provided herein, will assume any loss, liability or damage to the

Generating Facility caused by lack of or failure of such protection. Such protective equipment specifications and design shall be consistent with the Traverse City Light and Power Department requirements. Prior to the Generating Facility operating in parallel with Utility distribution system, the Customer-Generator shall provide satisfactory evidence to Utility that it has met the requirements set forth in the Traverse City Light and Power Department Renewable Net Metering Agreement, which includes, but is not limited to, approval from the local building code inspector and electrical inspector.

The Customer-Generator will be solely responsible for the required synchronizing equipment and for properly synchronizing the Generating Facility with the Utility electric system. The Utility shall not be responsible for any damages to the customer's equipment or facility as a result of the Generating Facility.

Voltage fluctuation at the PCC during synchronizing is limited by IEEE Std. 1547.1.

The Customer-Generator is responsible for all damages caused to the Utility's system or to any other Utility customer's property from the Generating Facility.

The following requirements apply directly to the actual operation of the Generating Facility with the Utility:

- The Generating Facility may not commence parallel operation until approval has been given by the Utility. The completed installation is subject to inspection by the Utility prior to approval. Preceding this inspection, all contractual agreements must be executed by the Customer-Generator.
- The Generating Facility must be designed to prevent the Generating Facility from energizing a de-energized Utility line. The Generating Facility's circuit breaker or contactor must be blocked from closing in on a de-energized circuit.
- The Generating Facility shall discontinue parallel operation with a particular service and perform necessary isolation when requested by the Utility for any of the following reasons:
  1. When Utility personnel or public safety may be jeopardized.
  2. During voltage or loading problems, system emergencies, or when abnormal sectionalizing or circuit configuration occurs on the Utility system.
  3. During scheduled shutdowns of the Utility's equipment that are necessary to facilitate maintenance or repairs. Such scheduled shutdowns shall be coordinated with the Customer-Generator.
  4. In the event there is demonstrated electrical interference (i.e. Voltage Flicker, Harmonic Distortion, etc.) impacting the Utility's customers, suspected to be caused by the Generating Facility, and such interference

exceeds then current industry standards, the Utility reserves the right, at the Utility's initial expense, to install special test equipment as may be required to perform a disturbance analysis and monitor the operation and control of the Generating Facility to evaluate the quality of power produced by the Generating Facility. In the event that no standards exist, then the applicable tariffs and rules governing electric service shall apply. If the Generating Facility is proven to be the source of the interference, and that interference exceeds the Utility's standards or the generally accepted industry standards, then it shall be the responsibility of the Customer/Generator to eliminate the interference problem and to reimburse the Utility for the costs of the disturbance monitoring installation, removal, and analysis, excluding the cost of the meters or other special test equipment, and any costs of damages.

5. When either the Generating Facility or its associated synchronizing and protective equipment is demonstrated by the Utility to be improperly maintained, so as to present a hazard to the Utility's employees, system, or its customers.
6. Whenever the Generating Facility is operating isolated with other Utility customers, for whatever reason.
7. Whenever a loss of communication channel alarm is received from a location where a communication channel has been installed for the protection of the Utility's system.
8. Whenever the Utility notifies the Customer-Generator in writing of a claimed non-safety related violation as determined by the Utility and the Customer-Generator fails to remedy the claimed violation within 10 business days of notification, unless within that time the Customer-Generator and the Utility agree in writing to a different procedure.

If the Generating Facility has shown an unsatisfactory response to requests to separate the generation from the Utility system, the Utility reserves the right to disconnect the Generating Facility from parallel operation with the Utility electric system until all operational issues are satisfactorily resolved.

- 5 Installation Approval:** Prior to final approval for parallel operation, the Utility's specified relay calibration settings shall be applied and a commissioning test must be performed on the generator relaying and control equipment that involves the protection of the Utility electric system. The commissioning test must be witnessed by the Utility. The Customer-Generator must provide the Utility with a minimum 10 business days advance written notice of when the Generating Facility will be ready for inspection, testing, and approval. The Customer-Generator shall perform operational testing and inspection of the Generating Facility at least 5 days before interconnection. The Customer-Generator shall contact Utility and arrange for a mutually agreeable time for performing said tests. Utility may send qualified personnel to the Generating Facility site to

inspect the Generating Facility and observe the testing. Customer-Generator shall provide Utility a written test report when such testing and inspection is completed and prior to interconnection, for Utility review and approval. Inspection, testing and / or approval by Utility or the omission of any inspection, testing and/or approval by Utility pursuant to this Agreement shall not relieve the Customer-Generator of any obligations or responsibility assumed under this Agreement.

**6 Isolation Device:** An isolation device is required for interconnection and should be placed at the Point of Common Coupling (PCC). It can be a circuit breaker, circuit switcher, pole top switch, load-break disconnect, etc., depending on the electrical system configuration. The following are required of the isolation device:

- Must be approved for use on the Utility system.
- Must comply with current relevant ANSI, UL 1741 scope 1.1A, and IEEE Standards.
- Must have load break capability.
- Must be rated for the application.
- If used as part of a protective relaying scheme, it must have adequate interrupting capability. The Utility will provide maximum short circuit currents and X/R ratios available at the PCC, upon request.
- Must be lockable, operable and accessible by the Utility at all times (24 hours a day, 7 days a week).
- The Utility will determine if the isolation device will be used as a protective tagging point. If the determination is so made, the device must have visible open break provisions for padlocking in the open position and it must be gang operated. If the device has automatic operation, the controls must be located remote from the device.
- Must be located outside within five feet of the main service (as allowed by code).
- Must be approved by UL.

**7 Inverters:** All inverters used in the Generating Facility must comply with the IEEE standard 1547.1 and UL 1741 requirements for anti-islanding and disconnection from faults. All inverters to be installed shall have the UL 1741 listing.

**8 Periodic Maintenance and Testing Program:** The Utility reserves the right to test the relaying and control equipment that involves protection of the electric system whenever the Utility determines a reasonable need for such testing exists.

The Customer-Generator is solely responsible for conducting proper periodic maintenance on the generating equipment and its associated control, protective equipment, interrupting devices, and main isolation device.

Protective relay equipment shall be tested every two (2) years (unless an extension is agreed to by Utility) to verify the calibration indicated on the latest relay setting document issued by Utility. Tests shall be conducted or witnessed by Utility at Customer-Generator's expense. The results of such tests shall be provided to Utility in writing for review and approval. Utility may, at any time and at the Utility's expense, inspect and test the Generating Facility to verify that the required protective interconnection equipment is in service, properly maintained, and calibrated to provide the intended protection. If necessary, this inspection may also include a review of Customer-Generator's pertinent records. Inspection, testing and / or approval by Utility or the omission of any inspection, testing and/or approval by Utility pursuant to this Agreement shall not relieve the Customer-Generator of any obligations or responsibility assumed under this Agreement.

The Customer-Generator is responsible for the periodic scheduled maintenance on those relays, interrupting devices, control schemes, and batteries that involve the protection of the Utility electric system. If the interconnection system is certified to meet IEEE Std. 1547.1, the Standard requires that testing be conducted in accordance with written test procedures, and the nationally recognized testing laboratory providing certification, will require that such test procedures be available before certification of the equipment. Otherwise, a periodic maintenance program is to be established to test these relays or inverters at least every 2 years. Test reports of such testing shall be maintained by the Customer-Generator and made available for Utility inspection upon request for a period of four years.

Each routine maintenance check of the inverter equipment shall include both an exact calibration check and an actual trip of the circuit breaker or contactor from the device being tested. For each test, a report shall be submitted to the Utility indicating the results of the tests made and the "as found" and "as left" relay calibration values. Visually setting, without verification, of a setting is not considered an adequate relay calibration check.

- 9 **Site Limitations:** The Customer-Generator is responsible for evaluating the consequences of unstable generator operation or voltage transients on the Generating Facility equipment, and determining, designing, and applying any relaying which may be necessary to protect that equipment. This type of protection is typically applied on individual generators to protect the Generating Facility.

The Utility will determine if operation of the Generating Facility will create objectionable voltage flicker and/or disturbances to other Utility customers and develop any required mitigation measures at the Customer-Generator's expense. If at any time during operation of the Generating Facility, an objectionable voltage flicker and/or disturbances to other Utility customers are determined, the Utility will develop any required mitigation measures at the

Customer-Generator's expense. At the sole discretion of the Utility, the Customer-Generator will be required to shutdown operation of the Generating Facility until satisfactory mitigation measures have been implemented.

- 10 Revenue Metering Requirements:** The Utility will own, operate, and maintain all required billing metering equipment. More than one meter may be required.

Special billing metering will be required.

The Customer-Generator may be required to provide, at no cost to the Utility, a dedicated dial-up voice-grade circuit (POTS line) to allow remote access to the billing meter by the Utility. This circuit shall be terminated within 10 feet of the meter involved or as specified by the Utility.

The Customer-Generator shall provide the Utility access to the premises at all times to install, turn on, disconnect, inspect, test, read, repair, or remove the metering equipment. The Customer-Generator may, at its option, have a representative witness this work.

The metering installations shall be constructed in accordance with the practices, which normally apply to the construction of metering installations for residential, commercial, or industrial customers. For Generating Facilities with multiple generators, metering of each generator may be required. When practical, multiple generators may be metered at a common point provided the metered quantity represents only the gross generator output.

The Utility shall supply to the Customer-Generator all required metering equipment and the standard detailed specifications and requirements relating to the location, construction, and access of the metering installation and will provide consultation pertaining to the meter installation as required. The Utility will endeavor to coordinate the delivery of these materials with the Customer-Generator's installation schedule during normal scheduled business hours.

The Customer-Generator may be required to provide a mounting surface for the metering equipment. The mounting surface and location must meet the Utility's specifications and requirements.

The responsibility for installation of the equipment is shared between the Utility and the Customer-Generator. The Customer-Generator may be required to install some of the metering equipment on its side of the PCC, including instrument transformers, cabinets, conduits, and mounting surfaces. The Utility shall install the meters and communication links. The Utility will endeavor to coordinate the installation of these items with the Customer-Generator's schedule during normal scheduled business hours.

- 11 Communication Circuits:** If required, the Customer-Generator is responsible for ordering and acquiring the telephone circuit required for the Generating Facility Interconnection. The Customer-Generator will assume all installation, operating, and maintenance costs associated with the telephone circuits, including the monthly charges for the telephone lines and any rental equipment required by the local telephone provider. However, at the Utility's discretion, the Utility may select an alternative communication method, such as wireless communications. Regardless of the method, the Customer-Generator will be responsible for all costs associated with the material and installation, whereas the Utility will be responsible to define the specific communication requirements.

The Utility will cooperate and provide information necessary for proper installation of the telephone circuits upon written request.

- 12 Automatic Reclosing:** The Utility employs automatic multiple-shot reclosing on most of the Utility's circuit breakers and circuit reclosers to increase the reliability of service to its customers. Automatic single-phase and three phase overhead reclosers may be installed on distribution circuits to isolate faulted segments of these circuits.

The Customer-Generator is advised to consider the effects of Automatic Reclosing (both single-phase and three- phase) to assure that the Generating Facility's internal equipment will not be damaged. In addition to the risk of damage to the Generating Facility, an out-of-phase reclosing operation may also present a hazard to Utility's electric system equipment since this equipment may not be rated or built to withstand this type of reclosing.

Should the Utility determine relaying and control equipment that needs to be installed to protect its own equipment from out-of-phase reclosing. Installation of this protection will be undertaken by the Utility at the Customer-Generator's expense.

- 13 Other:** The Customer-Generator shall follow all current Renewable Net Metering Generator Interconnection Policy provisions and as may be changed by the Utility. The Customer-Generator shall also follow any future requirements required by the Utility in order for the Utility to meet electric system operating requirements and requirements of any regulatory agency, market participant or agent of the Utility, including but not limited to the Midwest Independent System Operator, North American Electric Reliability Corporation, and Reliability *First* Corporation.

**APPENDIX E  
CONTACT LIST**

