TRAVERSE CITY LIGHT AND POWER

Distributed Energy Resources (DER) Interconnection Program Description

DER Program Description

Introduction

This document outlines the process, requirements, and agreements used to install or modify DER projects to operate in parallel with the Traverse City Light & Power (Utility or TCLP) electric system. A DER is a small generation or storage resource, such as solar panels or batteries, that is connected to the Utility's electrical distribution system. The energy from these installations is produced and consumed locally. These installations are Customer owned and maintained and are beneficial to the Customer, Utility, and community.

DER Approval Process

The Customer must first fill out a DER Interconnection Application (Available Online) and pay a one-time $100 application fee. The Utility will then review the application to ensure its completeness and determine if the system meets all safety requirements. If the initial application meets these requirements the Utility will then perform an interconnection study. Once this study is complete and the application is approved, the Customer will be required to enter into a DER Interconnection Agreement before operation in parallel with the electric system shall be granted.

Application Submittal

The Customer shall submit a completed Application, the necessary Application Data, and the application fee to the Utility. Prior to submitting the Application, the Customer shall be familiar with the Utility DER Interconnection Program, including but not limited to the DER Interconnection Agreement.

Major Component Design Requirements

Once the initial Application has been reviewed additional data may be requested for any equipment and relaying proposed by the Customer. This documentation must be submitted for review and approval by the Utility prior to construction. The Utility may request additional data to be submitted as necessary during the study phase to clarify the interconnection, equipment and protection system, and operation of the DER system.

Data

The data that the Utility requires in order to evaluate the proposed interconnection will be provided by the Customer in the online Application. A site plan, one-line diagrams, protection equipment, inverters, solar panels (if applicable), and interconnection protection system details of the DER system are required as part of the application data. See the application for specific requirements. Additional system or equipment data shall be provided to TCLP upon request.

Interconnection Study
Upon receipt of a fully completed DER Interconnection Application and a $100 application fee, the Utility will perform a basic Interconnection Study to determine the impact of the DER system on the Utility's system, and the modifications required for safe and reliable interconnection of the DER system to the system. If the proposed DER installation is greater than 500kW a more in-depth review may be required for an additional fee. See the DER Agreement for details.

DER Interconnection Application Approval
Once the study is complete the Utility shall, in writing, inform the Customer of the approval of the interconnection pending any specific requirements such as a smaller generation or storage facility capacity than applied for. ***Submittal of an Application does not guarantee that the Utility will approve the DER Interconnection Application as requested. The Utility may in its sole discretion work with applicants on Utility system modifications required to facilitate their desired capacity.***
Upon approval of the DER Interconnection Application by the Utility, the Customer shall be required to execute the DER Interconnection Agreement.

DER Interconnection Agreement
The DER Interconnection Agreement outlines the terms and conditions of participation in the Utility's DER Interconnection Program. The DER Interconnection Agreement is included in this document and can be found in Appendix A. It contains subjects such as construction of facilities, interconnection requirements, operating requirements, interconnection costs, billing, defaults and remedies, insurance, and liability. All Utility costs, associated with making modifications to its distribution system, will be paid by the Customer.

Requirements for DER, Interconnection, and Operation
A sample copy of the requirements is included in this document and can be found in Appendix B. ***Once installed, the interconnection equipment must be reviewed and approved by the Utility prior to being connected to the electric system and before parallel operation is allowed.***

Ongoing Operations
The Customer and the Utility will exchange contact information and update this information from time to time. The Contact List to be completed can be found in Appendix C.

Insurance
The Customer is advised to consult its insurers and insurance policies regarding the existence of coverage for onsite distributed generation resources. Homeowners' policies

and insurers may afford varying degrees of coverage for this exposure, or may exclude it altogether. This statement is not to be viewed as the rendering of advice regarding the Customer's insurance coverage.

Relationship to DER Agreement

This DER program description is provided for information purposes only. The DER program description is not a contract and is not binding on TCLP. If there are any conflicts, ambiguities, or inconsistencies between this DER program description and the DER Agreement, the terms of the DER Agreement shall control.

APPENDIX A
TRAVERSE CITY LIGHT AND POWER
DER AGREEMENT

TRAVERSE CITY LIGHT AND POWER

DISTRIBUTED ENERGY RESOURCES (DER) AGREEMENT

FOR CUSTOMER SYSTEMS

THIS DER AGREEMENT (the "Agreement"), is made as of this _____ day of _____, _____, by and between Traverse City Light and Power Department, ("TCLP" or the "Utility") and _____, ("Customer") for service at _____. The Utility and the Customer 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 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 Rules and Regulations.

C. Customer 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 nameplate capacity of ____ kilowatts ("DER system"), for the purpose of offsetting part, all, or more than the Customer's electric service requirements.

D. It is anticipated that the DER system may, from time to time, generate less than all of the Customer's electrical requirements at the DER systemlocation. The DER system may, from time to time, generate energy in excess of the Customer's electrical requirements at the DER system location.

E. The DER system and the Utility's electric system will be interconnected at one meter location determined by the Utility.

F. All DER projects shall be located on property owned or leased by the applicant.

AGREEMENT

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

1 Service Under Available Rates

Customer has or will be receiving service from the Utility under the Utility's policies and procedures, and available Rates, and will continue to receive such service under terms and conditions as may be amended by the Utility, and under the terms and conditions of this Agreement. The Utility may, at its sole discretion, require the Customer to elect a particular rate schedule as a condition of this Agreement.

2 Parallel Operation

Customer may, subject to the Utility's Rates, Rules and Regulations, and this Agreement between Customer and Utility, deliver into the Utility's electric system such energy generated by the DER system as the Customer elects.

Only eligible DER systems may be used to participate in this Agreement. Eligible DER systems shall be limited to one of the following: (a) a Renewable Energy Resource, as defined by Public Act 235 of 2023, as amended; (b) a Clean Energy System, as defined by Public Act 235 of 2023, as amended; or (c) a Battery Energy Storage System.

The Customer 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. The Utility shall own, operate and maintain all required billing metering equipment.

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

3 Aggregate Size Limitation on DER system

There are no definitive system size limitations, however the system study performed by the Utility may indicate a size limitation due to system

configuration. This will ultimately be the determining factor of allowable installation size.

The Utility in its sole discretion may reject installations or request modifications in order to prevent adverse system conditions as determined by the Utility in its exercise of technical judgment.

The Customer shall pay a non-refundable $100 application fee. This fee covers the Utilities cost to perform a basic system study. If the proposed DER installation is greater than 500 kW, a more in-depth review may be required for an additional fee.

A Customer shall be considered to be in violation of this Agreement if the Customer installs a DER system 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.

4 Delivery of Energy, Capacity, and RECs from the DER system

4.1 Customer shall deliver into the Utility's electric system at the Point of Common Connection such electric energy generated by the DER system as customer elects.

The "Point of Common Connection" is the location where the Utility's electric system is interconnected with the DER system. Such excess electric energy shall be delivered in the form of _____ phase, sixty hertz, and alternating current at _____ volts. In no event shall Customer 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 Energy Billing Terms and Conditions

(a) For purposes of this Agreement, the term "Inflow" shall mean the electricity the Customer uses from the Utility's distribution system.

(b) For purposes of this Agreement, the term "Outflow" shall mean the electricity generated by the Customer's DER system that is not used on-site and is instead delivered to the Utility's distribution system.

(c) The Utility shall measure the Customer's total Inflow and Outflow during each billing period, in accordance with normal metering practices

(d) The Customer shall pay the Utility's retail rate for Inflow specified in the rate schedule under which the Customer is served.

(e) The Utility shall provide to the Customer a monthly bill credit for Outflow at an Outflow rate or rates determined by the Utility from time to time. The Utility may specify different Outflow rates based upon the time of day and season.

(f) The Customer shall pay the applicable customer charge paid by other customers in the same electrical tariff rate class for each meter; and shall pay any other applicable charges, surcharges, and fees. If in any month the Customer's bill credit for Outflow exceeds the product of the Customer's Inflow multiplied by the rate schedule under which the customer is served, the remaining portion of the Outflow credit will be credited against other applicable charges, surcharges, and fees. The maximum Outflow credit for any given month shall be no greater than the sum of the product of the Customer's Inflow multiplied by the rate schedule under which the customer is served plus other applicable charges, surcharges, and fees for that month. There shall be no carrying over of Outflow credits from one month into another month or months.

4.3 Other Products

(a) All Renewable Energy Credits (RECs) generated by or associated with the DER system shall be owned by the Utility.

(b) The Utility shall have the exclusive right to claim and utilize the capacity of the DER system for meeting capacity, reliability, resource adequacy, and related requirements.

5 Interruption

5.1 At any time, and from time-to-time, the Utility may disconnect its electric system from the DER system or may interrupt or reduce the flow of energy to or from the DER system if, in the Utility's sole determination, the DER system 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 DER system or may interrupt or reduce the flow of energy to or from the DER system 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, 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 the Utility, in the exercise of reasonable judgment, deems appropriate to operate equipment lawfully and with 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 DER system if any one or more of the following conditions exist, including but not limited to: (a) those conditions listed in Attachment A – Requirements For Generation, Interconnection and Operation, (b) the electrical characteristics of the DER system are not compatible with the electrical characteristics of Utility's distribution system, (c) the Customer 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's protective relay equipment fails, resulting in a lack of the level of protection required by prudent utility practice, (f) the Customer's DER system is determined to be disrupting Utility customers, (g) Utility requires disconnecting the DER system 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, or (h) if a required component 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 DER system when, in Utility's 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 hereby releases the Utility from such liability. Unless caused by the sole negligence or intentional wrongdoing of the Utility, Customer 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 hereby releases the Utility from such compensation, reimbursement, or claim. These provisions are additional and cumulative to the provisions of this Agreement concerning governmental immunity.

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 Rules and Regulations.

6.2 Either party may disconnect the DER system 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 DER system 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 DER system 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 has not started construction by _____, ____, 20 ____ or DER system has not been inspected, tested, and approved by Utility by _____, ___, 20____. In either instance Utility shall notify Customer in writing of the automatic termination. Utility shall not be liable for any expenses incurred by Customer as a result of the termination.

7 Governmental Authority and Immunity

7.1 Customer shall obtain all governmental authorizations, licenses and permits needed for the construction and operation of the DER system.

7.2 The Customer 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.

7.3 Customer agrees that Utility's actions and activities related to this Agreement, the DER system, and the Utility's distribution system are a governmental function and not a proprietary function, and that Utility therefore has immunity from tort liability for all such actions and activities under applicable law.

8 Requirements for Generation, Interconnection and Operation

Customer shall comply with the Requirements for Generation, Interconnection and Operation (herein referred to as Requirements) as shown on Attachment A of this Agreement (Appendix B of the DER program documents), which is incorporated here by reference.

9 Information

Customer warrants and represents that all information in its application or submitted in connection with that application is true. Customer shall promptly furnish the Utility with copies of such plans, specifications, records, and other information relating to the DER system or the ownership, operation, use, or maintenance of the DER system, 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; (iv) or by email, if and only if receipt of the email is confirmed by the other Party. 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. Either Party may change their contact information by notifying the other Party in writing and confirming the other Party's receipt of such notification.

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
Email: _____

Customer: _____

_____

_____

Attn: _____
Tel. ( ) _____
Email: _____

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. Nothing in this provision shall be construed as a consent to suit or waiver of any defense or immunity otherwise arising under this Agreement or applicable law.

12 Utility Policies and Rates

This Agreement is subject to all Utility Policies, including the Rules and Regulations, 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 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 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 its attachments, 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.

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 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 or the DER system. 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. These provisions are additional and cumulative to the provisions of this Agreement concerning governmental immunity.

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 of 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 to operate and maintain its DER system 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 . 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	Customer
Traverse City Light and Power Department	_____
By: _____	By _____
Brandie, Ekren	
Its: Executive Director	Its _____
Date _____	Date _____

APPENDIX B
REQUIREMENTS FOR DER, INTERCONNECTION & OPERATION
(Attachment A to the DER Agreement)

ATTACHMENT A

REQUIREMENTS FOR

GENERATION, INTERCONNECTION & OPERATION

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

1 **Request for Service**: The Customer 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 shall make the proposed Generating/Storage 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/Storage 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/Storage 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'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 shall reimburse Utility for its costs and expenses for acquiring such easements / permits.

4 **Parallel Operation:** It is understood that the Generating/Storage Facility will normally remain connected to and be operated in parallel with the Utility's distribution system. The Customer 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/Storage 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/Storage 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/Storage Facility operating in parallel with Utility distribution system, the Customer shall provide satisfactory evidence to Utility that it has met the requirements set forth in the Traverse City Light and Power Department DER Agreement, which includes, but is not limited to, approval from the local building code inspector and electrical inspector.

The Customer will be solely responsible for the required synchronizing equipment and for properly synchronizing the Generating/Storage 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/Storage Facility.

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

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

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

- The Generating/Storage 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.

- The Generating/Storage Facility must be designed to prevent the Generating/Storage Facility from energizing a de-energized Utility line. The Generating/Storage Facility's circuit breaker or contactor must be blocked from closing in on a de-energized circuit.

- The Generating/Storage 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.

    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/Storage 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/Storage Facility to evaluate the quality of power produced by the Generating/Storage Facility. In the event that no standards exist, then the applicable tariffs and rules governing electric service shall apply. If the Generating/Storage 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/Storage 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/Storage 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 in writing of a claimed non-safety related violation as determined by the Utility and the Customer fails to remedy the claimed violation within 10 business days of notification, unless within that time the Customer and the Utility agree in writing to a different procedure.

If the Generating/Storage 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/Storage 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 must provide the Utility with a minimum 10 business days advance written notice of when the Generating/Storage Facility will be ready for inspection, testing, and approval. The Customer shall perform operational testing and inspection of the Generating/Storage Facility at least 5 days before interconnection. The Customer shall contact Utility and arrange for a

mutually agreeable time for performing said tests. Utility may send qualified personnel to the Generating/Storage Facility site to inspect the Generating/Storage Facility and observe the testing. Customer 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 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, 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).

7 **Inverters:** All inverters used in the Generating/Storage 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 **Battery System:** Battery system is defined as DC batteries, inverter, and all other equipment that is used to store electricity. A single inverter that runs the battery system and the panels is allowed. Any battery system must be present on the system one-line with its rated capacity. Any changes to the capacity of the

battery system must be reported to the utility. The Customer is solely responsible for the maintenance and replacement of the battery system.

9 **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 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 five (5) 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'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/Storage 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'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 of any obligations or responsibility assumed under this Agreement.

The Customer 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 5 years. Test reports of such testing shall be maintained by the Customer and made available for Utility inspection upon request for a period of six 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.

10 **Site Limitations:** The Customer is responsible for evaluating the consequences of unstable generator operation or voltage transients on the Generating/Storage 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/Storage Facility.

The Utility will determine if operation of the Generating/Storage Facility will create objectionable voltage flicker and/or disturbances to other Utility customers and develop any required mitigation measures at the Customer's expense. If at any time during operation of the Generating/Storage 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's expense. At the sole discretion of the Utility, the Customer will be required to shutdown operation of the Generating/Storage Facility until satisfactory mitigation measures have been implemented.

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

The Customer 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 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 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's installation schedule during normal scheduled business hours.

The Customer 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. The Customer 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's schedule during normal scheduled business hours.

12 Communication Circuits: If required, the Customer is responsible for paying for the installation of a fiber connection installed by the Utility for the Generating/Storage Facility Interconnection. Customer will be responsible for all

costs associated with the material and installation, whereas the Utility will be responsible to define the specific communication requirements.

13 **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 is advised to consider the effects of Automatic Reclosing (both single-phase and three- phase) to assure that the Generating/Storage Facility's internal equipment will not be damaged. In addition to the risk of damage to the Generating/Storage 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's expense.

14 **Other:** The Customer shall follow all current Rules and Regulations provisions and as may be changed by the Utility. The Customer 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 C
CONTACT LIST

CONTACT LIST

Normal Operations and Emergency Switching

Customer/Generator

Name: _____
Phone Number: _____
Alternate Phone Number: _____
Address: _____
Site Description: _____

Traverse City Light & Power

24 Hour Control Center Office: (231) 922-4940