

**Interconnection Standards for  
Installation and Parallel Operation of  
Customer-Owned Renewable Electric  
Generation Facilities 10 kW<sub>AC</sub> or Less**

**Village of Minster, Ohio**

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**May 2021**

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## PART 1. OVERVIEW

### 1. PURPOSE:

The purpose of this document is to establish standards for eligible customers (“Customer”) to interconnect and operate customer-owned solar Generation Facilities with a rated output of 10 kilowatts<sub>AC</sub> (kW<sub>AC</sub>) or less in parallel with the Village of Minster (“Village”) Electric Distribution System.

### 2. DEFINITIONS:

- a. **AC** – Alternating Current
- b. **Applicable Laws and Regulations** – All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority, including the Ordinances of the Village of Minster and Village Electric Utility Rules and Regulations and current and future Village Zoning Codes applicable to solar installations.
- c. **Village** – The Village of Minster, Ohio.
- d. **Village Electric System Avoided Energy Cost** – The average cost of energy per kilowatt-hour (kWh) to the Village of all power supply resources during the previous calendar year. The Village will review and adjust the Village Electric System Avoided Energy Cost annually.
- e. **Commercial Operation Date** – The date on which the Generation Facility is operating and is in compliance with the requirements of these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less as determined by Village.
- f. **Customer** – a Residential or Commercial electric customer interconnected to the Electric Distribution System for the purpose of receiving retail electric service that also owns and operates an approved Generation Facility.
- g. **DC** – Direct Current
- h. **Electric Distribution System** – The Village facilities and equipment used to provide electric service to customers, including the Customer.
- i. **Electric Utility** – The Village of Minster municipal electric system.
- j. **Force Majeure** – A Force Majeure event shall mean “any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party’s control.” A Force Majeure event does not include an act of negligence or intentional wrongdoing.

- k. **Generation Facility** – For purposes of these Interconnection Standards, the Customer device for conversion of solar energy to electricity, as identified in the Interconnection Application, that:
1. is owned by the Customer;
  2. has a rated output of 10 kW<sub>AC</sub> or less;
  3. is located on a premises owned, operated, leased or otherwise controlled by the Customer;
  4. is interconnected with and operates in parallel phase and synchronization with the Electric Distribution System and is in compliance with these Interconnection Standards;
  5. is intended primarily to offset part or all of the Customer's own electrical energy requirements;
  6. contains a mechanism(s), approved by the Village that automatically disconnects the Generation Facility and interrupts the flow of electricity to the Electric Distribution System in the event that electric service to the Customer is interrupted.
- l. **Governmental Authority** – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Customer or any Affiliate thereof.
- m. **Harmonic Distortion** – Continuous distortion of the normal AC sine wave typically caused by non-linear loads or inverters.
- n. **Interconnection Application** – The Customer request to interconnect a new Generation Facility, or to increase the capacity of, or make a material modification to the operating characteristics of an existing Generation Facility that is interconnected with the Electric Distribution System.
- o. **Interconnection Standards** – Interconnection Standards shall mean all provisions, forms and related documents described in the collective parts of these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less, or successor document.
- p. **Metering Point** – The electric meter shown on the one-line diagram accompanying the Interconnection Application.
- q. **Party** – Individually the Village and the Customer; collectively the "Parties."
- r. **Prudent Utility Practice** – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time

period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Prudent Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

- s. **Reasonable Efforts** – With respect to an action required to be attempted or taken by a Party under the Interconnection Agreement, efforts that are timely and consistent with Prudent Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.
- t. **System Upgrades** – Additions, modifications, improvements, and upgrades to the Electric Distribution System or Customer service connection at or beyond the point of interconnection to facilitate interconnection of the Customer Generation Facility. System Upgrades do not include interconnection facilities.
- u. **Voltage Flicker** – A variation of voltage sufficient in duration to allow visual observation of a change in electric light source intensity.

### 3. **ELIGIBILITY:**

- a. Must be a Residential or Commercial electric customer with a Village-approved customer-owned renewable Generation Facility connected behind the meter (connected to the customer side of the electric meter) and single-phase or three-phase service at 60 Hertz at a nominal voltage of 120/240 volts or 480 volts furnished through a single bidirectional electric meter.
- b. Customer's utility account must be in good standing and in compliance with Village electric rate schedules and Rules and Regulations. The Interconnection Agreement shall be between the Village and the Customer and will not include third parties.
- c. These Interconnection Standards apply to a customer-owned solar Generation Facility with a rated output of 10 kW<sub>AC</sub> or less. A Generation Facility that is not powered by a solar energy resource or a Generation Facility with a rated output greater than 10 kW<sub>AC</sub> is subject to separate negotiation with the Village and is not eligible to interconnect with the Electric Distribution System under these Interconnection Standards.
- d. The Generation Facility may not be sized to exceed the Customer's annual electric energy requirements.
- e. The Generation Facility: 1) must be owned by the Customer; 2) must be located on the Customer's premises; and 3) must serve only the Customer's premises.

### 4. **INTERCONNECTION REQUEST:**

The Customer shall request interconnection of a Generation Facility by completing and submitting the attached document entitled “Interconnection Application” to the Village. The Village may require additional information or clarification to evaluate the Customer Interconnection Request.

**5. ELECTRIC DISTRIBUTION SYSTEM EFFECTS ANALYSIS:**

After receiving a properly completed Interconnection Application, the Village will analyze the potential impacts of the Generation Facility on the Electric Distribution System and on other Electric Utility customers. Such analyses will be based on Prudent Utility Practice to determine thermal effects, voltage ranges, power quality, system stability, etc.

**6. SYSTEM UPGRADES:**

Where System Upgrades are required prior to interconnection of the Generation Facility as a result of the Electric Distribution System Effects Analysis, the Village will provide the Customer with an estimated schedule and Customer’s cost for said System Upgrades. If the Customer desires to proceed with said System Upgrades, the Parties shall enter into a written agreement for the same. The agreement will contain an estimated construction schedule, including target commencement and completion dates, and an estimate of the Customer’s costs for said System Upgrades.

**7. INTERCONNECTION AGREEMENT:**

After the Customer and the Village have identified and mutually agreed on the project scope including the Generation Facility, System Upgrades and estimated costs, the Customer and the Village shall execute the attached document entitled “Interconnection Agreement.”

**8. CODES AND PERMITS:**

- a. The Customer shall be responsible for procuring all building, operating, environmental or other permits for the Generation Facility and for the necessary ancillary structures to be installed that are required by any Governmental Authority having jurisdiction.
- b. The Generation Facility and interconnecting equipment shall meet the requirements listed in “Part 2. Technical Requirements” of these Interconnection Standards.
- c. The construction and facilities shall meet all applicable building and electrical codes.

**9. CERTIFICATE OF COMPLETION:**

Upon completion of the Generation Facility and prior to the Commercial Operation Date of said Facility, the Customer shall complete and submit a signed copy of the attached document entitled “Certificate of Completion.”

**10. NORMAL OPERATION:**

The Customer may begin Commercial Operation of the Generation Facility upon receipt of written approval from the Village.

**11. SMALL POWER PRODUCTION SCHEDULE “SSP”:**

The Customer shall complete and submit the “Small Power Production Schedule - Application for Service” to apply for electric service under the Small Power Production Schedule.



## **PART 2. TECHNICAL REQUIREMENTS**

### **1. CHARACTER OF SERVICE:**

The electric service shall be 60 cycles per second (60 Hertz) alternating current (AC) at supply voltages and number of phases under the Residential or Commercial electric rate schedule that would apply if the Customer did not have an interconnected Generation Facility.

### **2. CODE REQUIREMENTS:**

The Generation Facility shall meet all requirements established by the National Electrical Code (NEC), National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), and the Occupational Safety and Health Administration. Specific applicable codes are shown in Section 7 of this Part 2 below as “Standards for Interconnection, Safety and Operating Reliability.” In addition, manufacturer’s ownership, operating and maintenance manuals or documents shall be provided to the City with the Customer Interconnection Application. The Village shall review said manuals or documents prior to authorizing interconnection of the Generation Facility.

### **3. GENERATION FACILITY CONTROL:**

The control system of the Generation Facility shall comply with IEEE and UL specifications and standards for parallel operation with the Electric Distribution System and in particular as follows:

- a. Power output control system shall automatically disconnect from the Electric Distribution System upon loss of System voltage and shall not reconnect until System voltage has been restored by the Village.
- b. Power output control system shall automatically disconnect from the Electric Distribution System if System voltage fluctuates beyond plus or minus 10% (ten percent).
- c. Power output control system shall automatically disconnect from the Electric Distribution System if frequency fluctuates plus or minus two cycles (2 Hertz).
- d. Inverter output Harmonic Distortion shall meet IEEE and UL standards.
- e. The Generation Facility shall meet applicable IEEE and UL standards concerning impacts to the Electric Distribution System with regard to Harmonic Distortion, Voltage Flicker, power factor, direct current injection and electromagnetic interference.

### **4. FAULT CURRENT CONTRIBUTION:**

The Generation Facility shall be equipped with protective equipment designed to automatically disconnect from the Electric Distribution System during fault current conditions and remain disconnected until System voltage and frequency have stabilized.

### **5. RECLOSING COORDINATION:**

The Generation Facility shall be coordinated with Electric Distribution System reclosing devices by disconnecting from the System during de-energized System operation. The Generation Facility shall remain disconnected until System voltage and frequency have stabilized.

**6. EXTERNAL GENERATOR AC DISCONNECT SWITCH:**

The Customer must install an external alternating current (AC) disconnect switch within six (6) feet of the Village electric meter that is visible and readily accessible to Village representatives. This switch must be clearly labeled as “Generator AC Disconnect Switch”. The switch shall be capable of being locked in an open position and shall prevent the generator from supplying power to the Electric Distribution System while in the open position.

**7. STANDARDS FOR INTERCONNECTION, SAFETY AND OPERATING RELIABILITY:**

The interconnection of a Generation Facility and associated equipment to the Electric Distribution System shall meet the applicable provisions of the following publications or successor standards:

- a. ANSI/IEEE1547-2003 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity). The following standards shall be used as guidance in applying IEEE 1574:
  1. IEEE Standard 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
  2. IEC/TR3 61000-3-7 Assessment of emission limits for fluctuating loads in MV and HV power systems
- b. UL 1741 Standard for Inverters, Converters and Controllers for Use in Independent Power Systems
- c. ANSI/NFPA 70 (2008), National Electrical Code
- d. OSHA (29 CFR § 1910.269)

**8. ACCESS AND INSPECTION BY VILLAGE:**

Customer must provide the Village reasonable opportunity to inspect the Generation Facility prior to its interconnection and Commercial Operation Date and to witness initial testing and commissioning of the Generation Facility. The Village may witness any commissioning tests required by IEEE 1547/UL 1741.

Following initial testing and inspection of the Generation Facility and upon reasonable advance notice to Customer, the Village shall have access at reasonable times to the Generation Facility to perform on-site inspections to verify that the installation, maintenance and operation of the Generation Facility complies with the requirements of these Interconnection Standards. The Village cost of such inspection(s) shall be at the Village’s expense; however, the Village shall not be responsible for any other cost

Customer may incur as a result of such inspection(s). Upon written request, Customer shall inform the Village of the next scheduled maintenance and allow the Village to witness the maintenance program and any associated testing.

The Village shall at all times have immediate access to the external Generator AC Disconnect Switch to isolate the Generation Facility from the Electric Distribution System.

**9. GENERATION FACILITY OPERATION:**

- a. Customer shall install, operate, and maintain, at Customer's sole cost and expense, the Generation Facility in accordance with the manufacturer's suggested practices for safe, efficient and reliable operation of the Generation Facility in parallel with the Electric Distribution System. Customer shall bear full responsibility for the installation, maintenance and safe operation of the Generation Facility. Upon request from the Village, Customer shall supply copies of periodic test reports or inspection logs.
- b. Customer shall be responsible for protecting, at Customer's sole cost and expense, the Generation Facility from any condition or disturbance on the Electric Distribution System, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges.
- c. Customer agrees that, without prior written permission from the Village, no changes shall be made to the configuration of the Generation Facility as approved by the Village, and no relay or other control or protection settings shall be set, reset, adjusted or tampered with, except to the extent necessary to verify that the Generation Facility complies with Village-approved settings.
- d. Customer shall operate the Generation Facility in such a manner as not to cause undue voltage fluctuations, power quality issues, intermittent load characteristics, or to otherwise interfere with the operation of the Electric Distribution System. At all times when the Generation Facility is operated in parallel with the Electric Distribution System, Customer shall operate said Generation Facility in such a manner that no disturbance will be produced thereby to the service rendered by the Village to any of its other customers or to any electric system interconnected with the Electric Distribution System. Customer understands and agrees that the interconnection and operation of the Generation Facility pursuant to these Interconnection Standards is secondary to, and shall not interfere with, the Village's ability to meet its primary responsibility of furnishing reasonably adequate service to its customers.
- e. Customer's control equipment for the Generation Facility shall immediately, completely, and automatically disconnect and isolate the Generation Facility from the Electric Distribution System in the event of a fault on the Electric Distribution System, a fault on Customer's electric system, or loss of a source or sources on the Electric Distribution System. The automatic disconnecting device included in such control equipment shall not be capable of reclosing until after service is restored on the Electric Distribution System. Additionally, if the fault is on Customer's electric system, such

automatic disconnecting device shall not be reclosed until after the fault is isolated from the Customer's electric system.

**10. RIGHT TO DISCONNECT GENERATION FACILITY:**

The Village shall have the right and authority to isolate the Generation Facility without notice at the Village's sole discretion if the Village believes that any of the following have occurred or are occurring:

- a. Adverse electrical effects (such as power quality problems) imposed on the Electric Distribution System and/or the electrical equipment of other Electric Utility customers attributed to the Generation Facility as determined by the Village.
- b. Electric Distribution System emergencies or maintenance requirements
- c. Hazardous conditions existing on the Electric Distribution System as a result of the operation of the Generation Facility or protective equipment
- d. Failure of the Customer to maintain the required insurance and to provide the Village with proof of insurance within ten (10) days of request.
- e. Village identification of uninspected or unapproved equipment or modifications to the Generation Facility after initial approval.
- f. Recurring abnormal operation, substandard operation or inadequate maintenance of the Generation Facility.
- g. In non-emergency situations, the Village shall give Customer notice of noncompliance including a description of the specific noncompliance condition and allow Customer a reasonable time to cure the noncompliance prior to isolating the Generation Facility.
- h. In the event that the Village isolates the Generation Facility for routine maintenance, the Village shall make reasonable efforts to reconnect the Generation Facility within seven (7) business days of isolation.
- i. The Customer retains the option to temporarily disconnect the Generation Facility from the Electric Distribution System at any time. Such temporary disconnection shall not constitute termination of the Interconnection Agreement unless the Customer exercises its termination rights under Section 14.

**11. RATES AND OTHER CHARGES:**

Any Village billing credit for surplus energy generated by the Generation Facility and delivered to the Electric Distribution System is subject to the terms and conditions of the Small Power Production Rate Schedule. .

**12. INSURANCE:**

Customer shall maintain reasonable amounts of insurance coverage against risks related to the Generation Facility for which there is a reasonable likelihood of occurrence. Customer shall agree to provide the Village with proof of such insurance upon the Village's request.

The Village's receipt of evidence of insurance coverage does not imply an endorsement of the terms and conditions of said coverage.

**13. LIMITATION OF LIABILITY AND INDEMNIFICATION:**

Customer agrees to assume all liability for and shall indemnify the Village for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the design, construction, operation or maintenance of the Generation Facility. Such indemnity shall include, but is not limited to, financial responsibility for: (a) the Village's monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third party; (c) damages related to the death or injury of a third party; (d) damages to the property of the Village; (e) damages to the property of a third party; (f) damages for the disruption of the business of a third party. This paragraph does not create a liability on the part of the Customer to the Village or a third party, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing.

**14. EFFECTIVE TERM AND TERMINATION RIGHTS:**

The Interconnection Agreement shall become effective when executed by both Parties and shall continue in effect until terminated in accordance with the provisions of this Section. The Interconnection Agreement may be terminated for the following reasons:

- a. Customer may terminate the Interconnection Agreement at any time by giving the Village at least sixty (60) days' prior written notice stating Customer's intent to terminate the Agreement at the expiration of such notice period;
- b. the Village may terminate the Agreement at any time following Customer's failure to generate energy from the Generation Facility in parallel with the Electric Distribution System by the later of two (2) years from the date of execution of the Interconnection Agreement or twelve (12) months after completion of the interconnection provided for by the Agreement;
- c. either Party may terminate the Interconnection Agreement at any time by giving the other Party at least sixty (60) days' prior written notice that the other Party is in default of any of the material terms and conditions of the Interconnection Agreement or the Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less, so long as the notice specifies the basis for termination and there is reasonable opportunity for the Party in default to cure the default; or
- d. the Village may terminate the Interconnection Agreement at any time by giving Customer at least sixty (60) days' prior written notice in the event that there is a change in an applicable rule or statute affecting the Agreement.

Upon termination of the Interconnection Agreement, Customer's Generation Facility shall be permanently disconnected from the Electric Distribution System.

Termination of the Interconnection Agreement shall not relieve either party of its liabilities and obligations, owed or continuing at the time of said termination.

**15. TERMINATION OF ANY APPLICABLE PRIOR AGREEMENT:**

From and after the date when service commences under the Interconnection Agreement, the Agreement shall supersede any oral and/or written agreement or understanding between the Village and Customer concerning the interconnection service covered by the Agreement. Any such prior agreement or understanding shall be deemed to be terminated as of the date interconnection service commences under the Interconnection Agreement.

**16. FORCE MAJEURE:**

For purposes of the Interconnection Agreement, the term "Force Majeure" means any cause or event not reasonably within the control of the Party claiming Force Majeure, including, but not limited to, the following: acts of God, strikes, lockouts, or other industrial disturbances; acts of public enemies; orders or permits or the absence of the necessary orders or permits of any kind which have been properly applied for from the government of the United States, the State of Ohio, any political subdivision or municipal subdivision or any of their departments, agencies or officials, or any civil or military authority; unavailability of a fuel or resource used in connection with the generation of electricity; extraordinary delay in transportation; unforeseen soil conditions; equipment, material, supplies, labor or machinery shortages; epidemics; landslides; lightning; earthquakes; fires; hurricanes; tornadoes; storms; floods; washouts; drought; arrest; war; civil disturbances; explosions; breakage or accident to machinery, transmission lines, pipes or canals; partial or entire failure of utilities; breach of contract by any supplier, contractor, subcontractor, laborer or materialman; sabotage; injunction; blight; famine; blockade; or quarantine.

If either Party is rendered wholly or partly unable to perform its obligations under the Interconnection Agreement because of Force Majeure, both Parties shall be excused from whatever obligations under the Agreement are affected by the Force Majeure (other than the obligation to pay money) and shall not be liable or responsible for any delay in the performance of, or the inability to perform, any such obligations for so long as the Force Majeure continues. The Party suffering an occurrence of Force Majeure shall, as soon as is reasonably possible after such occurrence, give the other Party written notice describing the particulars of the occurrence and shall use reasonable efforts to remedy its inability to perform; provided, however, that the settlement of any strike, walkout, lockout or other labor dispute shall be entirely within the discretion of the Party involved in such labor dispute.

### PART 3. INTERCONNECTION APPLICATION

Application No. \_\_\_\_\_

#### **Village of Minster** **Customer-Owned Renewable Electric Generation Facility 10 kW<sub>AC</sub> or Less**

This Application for Interconnection of a Customer-Owned Renewable Electric Generation Facility 10 kW<sub>AC</sub> or less is considered complete when it provides all applicable and correct information required below. Additional information or clarification to evaluate the Interconnection Application may be required by the Village.

##### Processing Fee

☐ A non-refundable processing fee of \$50 must accompany this Application.

##### Customer

Name: \_\_\_\_\_ Utility Account Number: \_\_\_\_\_

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

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

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Is the Generation Facility owned by the Customer listed above? ☐ Yes ☐ No

##### Contact (if different from Customer)

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

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

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

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

##### Generation Facility Information

Location (if different from above): \_\_\_\_\_

Inverter Manufacturer: \_\_\_\_\_

Model \_\_\_\_\_

Nameplate Rating: (kW) \_\_\_\_\_ (kVA) \_\_\_\_\_

System Design Capacity: (kW<sub>AC</sub>) \_\_\_\_\_ (kVA<sub>AC</sub>) \_\_\_\_\_

Energy Source: Solar ☐

Is the Generation Facility equipment IEEE 1547/UL 1741 Certified? ☐ Yes ☐ No

If Yes, attach manufacturer's documentation showing IEEE 1547/UL 1741 certification

Village Accessible External Generator AC Disconnect Switch Provided (Required) ☐ Yes ☐ No

Location of Village Accessible External Generator AC Disconnect Switch \_\_\_\_\_  
(e.g. Two feet west of electric meter)

Estimated Installation Date: \_\_\_\_\_ Estimated Commercial Operation Date: \_\_\_\_\_

List components of the Generation Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

**Equipment Installation Contractor:** Indicate by owner if applicable ☐

Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person (If other than Above): \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Electrical Contractor:** (If Applicable) Indicate if not applicable ☐

Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person (If other than Above): \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Consulting Engineer:** (If Applicable) Indicate if not applicable ☐

Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person (If other than Above): \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Provide a one line diagram of the Generation Facility.** The one line diagram is a basic drawing of an electric circuit in which one or more conductors are represented by a single line and each electrical device and major component of the installation, from the generator to the point of interconnection, are noted by symbols. See attached example.



Provide copies of manufacturer's ownership, operating and maintenance manuals for all Generation equipment, inverters, and other proposed Generation Facility equipment.

**Customer Signature**

I hereby certify that, to the best of my knowledge, the information provided in this Interconnection Application is true. I agree to abide by the terms and conditions of the Village's Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less and will return the Certificate of Completion when the Generation Facility has been installed.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

-----**Utility Use**-----

**Contingent Approval to Interconnect the Generation Facility**

Interconnection of the Generation Facility is approved contingent upon the terms and conditions of the Village's Interconnection Standards and upon return of the Certificate of Completion.

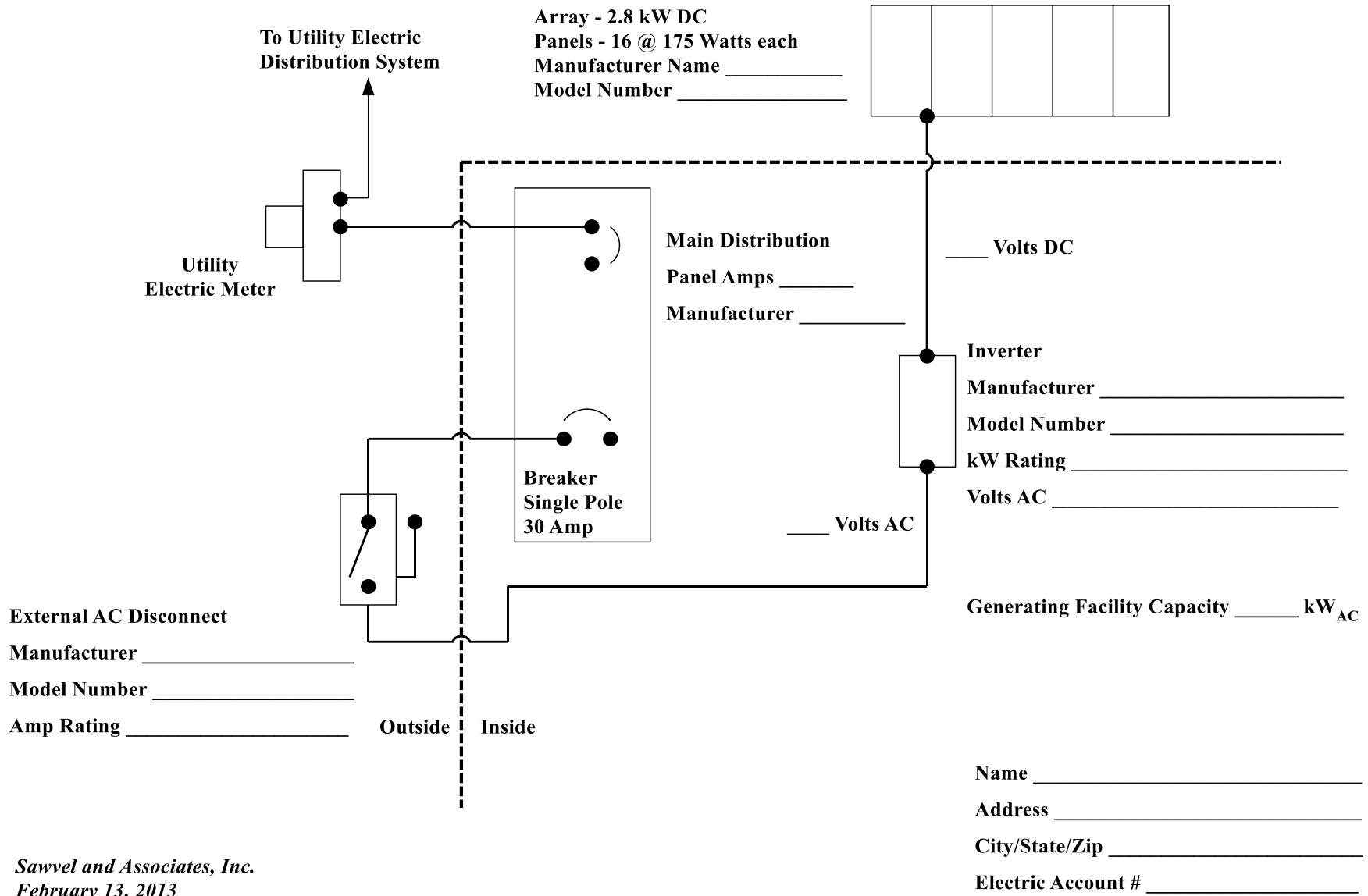
Village Signature: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

Application Number: \_\_\_\_\_

Village waives inspection/witness test? ☐ Yes ☐ No Initial \_\_\_\_\_

## One Line Diagram Example



*Sawvel and Associates, Inc.*  
 February 13, 2013

## PART 4. INTERCONNECTION AGREEMENT

Application No. \_\_\_\_\_

### **Village of Minster Customer-Owned Renewable Electric Generation Facility 10 kW<sub>AC</sub> or Less**

This Agreement, (“**Agreement**”) is entered into by and between the Village of Minster, Ohio (“**Village**”) and \_\_\_\_\_, (“**Customer**”). The Customer electric account subject to this Agreement is Account Number \_\_\_\_\_. Customer and Village are referenced in this Agreement collectively as “**Parties**” and individually as “**Party**.”

#### **Recitals**

WHEREAS, Village owns and operates an Electric Distribution System serving the Village of Minster, Ohio, and surrounding area;

WHEREAS, Customer owns or desires to install, own and operate a Village-approved renewable electric Generation Facility with a rated output of 10 kW<sub>AC</sub> or less, interconnected with and operating in parallel with the Electric Distribution System;

#### **Agreement**

NOW, THEREFORE, in consideration of the covenants and promises herein, the Parties mutually agree as follows:

**1. SCOPE OF AGREEMENT:**

This Agreement governs the terms and conditions under which the Generation Facility will interconnect with and operate in parallel with the Electric Distribution System.

**2. DEFINITIONS:**

The definitions used in this Interconnection Agreement are those found in Part 1, Section 2 of the Village Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less.

**3. PARALLEL OPERATION:**

Customer shall not interconnect or commence parallel operation of the Generation Facility until written Approval to Energize the Generation Facility under Part 7 of these Interconnection Standards has been provided by Village. Village shall have the right to have representatives present during initial testing of the Generation Facility and its protective apparatus.

**4. INTERCONNECTION COSTS:**

The Village has estimated the costs, including overheads, for necessary System Upgrades to its Electric Distribution System and Customer service connection, if any, and has provided a detailed itemization of such costs in the attached description of estimated System Upgrade costs. The Customer agrees to pay the System Upgrade costs within the timeframe indicated on the Village invoice upon receipt of said invoice.

**5. INTERRUPTION OR REDUCTION OF DELIVERIES:**

The Village may require the Customer to interrupt or reduce energy deliveries when the Village determines, in its sole discretion, that curtailment, interruption or reduction is necessary because of maintenance, safety, emergency, Force Majeure or compliance with Prudent Utility Practices. No compensation or credit will be provided to the Customer by the Village for such interruptions or reductions in energy deliveries.

**6. ADVERSE OPERATING EFFECTS:**

The interconnection of the Generation Facility shall not reduce the reliability and quality of the Village Electric Distribution System service. This includes, but is not limited to power quality issues such as Harmonic Distortion, Voltage Flicker and frequency deviations. The Village shall notify the Customer as soon as practicable if, based on Prudent Utility Practice, operation of the Generation Facility causes disruption in or deterioration of service to other Electric Utility customers or if operating the Generation Facility could damage the Electric Distribution System. If, after notice, the Customer fails to timely remedy the adverse operating effect, the Village may disconnect the Generation Facility with no further notice.

**7. LIMITATION OF LIABILITY AND INDEMNIFICATION:**

Customer shall assume all liability for and shall indemnify the Village for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the design, construction, operation or maintenance of the Generation Facility. Such indemnity shall include, but is not limited to, financial responsibility for: (a) the Village's monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third party; (c) damages related to the death or injury of a third party; (d) damages to the property of the Village; (e) damages to the property of a third party; (f) damages for the disruption of the business of a third party. This paragraph does not create a liability on the part of the Customer to the Village or a third party, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing.

**8. ACCESS TO PREMISES:**

Village shall have access to the Customer premises or property and to the External AC Generator Disconnect Switch as permitted in its policies, Rules and Regulations and these Interconnection Standards.

**9. GOVERNING LAW:**

This Agreement shall be interpreted and governed under the laws of the State of Ohio, the Ordinances of the Village of Minster, and Village Electric Rules and Regulations.

**10. DOCUMENTS:**

This Agreement incorporates all other provisions and related documents of these Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less as the same may be amended from time to time.

**11. NOTICES:**

All written notices shall be directed as follows:

**CUSTOMER:**

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

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

City/State/Zip: \_\_\_\_\_

**Village:**

Name: Village of Minster

Title: Administrator

Minster, Ohio 45865

**12. TERM OF AGREEMENT:**

This Agreement shall be in effect when executed by the Customer and Village and shall remain in effect thereafter month to month unless terminated in accordance with the provisions of Section 13 of "Part 2. Technical Requirements".

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives.

This Agreement is effective as of the last date set forth below.

**CUSTOMER:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

**For the VILLAGE:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Date

## PART 5. CERTIFICATE OF COMPLETION

Application No. \_\_\_\_\_

### **Village of Minster Customer-Owned Renewable Electric Generation Facility**

Is the Generation Facility installed, tested and ready for operation? Yes \_\_\_\_\_ No \_\_\_\_\_

Customer: \_\_\_\_\_ Utility Account Number: \_\_\_\_\_

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

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Location of the Generation Facility (if different from above):  
\_\_\_\_\_

#### Electrician/Service Company:

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

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

City/State/Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

License number: \_\_\_\_\_

Date Village approved interconnection of Generation Facility: \_\_\_\_\_

Application number: \_\_\_\_\_

#### Inspection:

The Generation Facility has been installed and inspected in compliance with all applicable electrical codes.

A copy of the signed electrical inspection form is attached. ☐ Yes ☐ No

(If inspection form is not attached)

\_\_\_\_\_  
Signature of inspector:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed name of inspector

**PART 6. APPROVAL TO ENERGIZE GENERATION FACILITY**

Application No. \_\_\_\_\_

**Village of MInster**  
**Customer-Owned Renewable Electric Generation Facility**

The Village of Minster, having entered into an Interconnection Agreement for the Generation Facility described in the Application noted by number above and having received a Certificate of Completion with proper documentation of the electrical inspection hereby authorizes the Generation Facility to be energized:

Village Signature: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

## PART 7. SMALL POWER PRODUCTION SCHEDULE “SPP” – APPLICATION FOR SERVICE

Application No. \_\_\_\_\_

### Village of Minster

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

Service Address: \_\_\_\_\_

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

Utility Account Number: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

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

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

E-Mail Address: \_\_\_\_\_

This application is for electric service under the Village of Minster (“Village”) Small Power Production Schedule for the above customer (“Customer”). The Customer Generation Facility is a solar Generation Facility with a rated output of 10 kW<sub>AC</sub> or less that is owned by the Customer, located on the Customer’s premises, operates in parallel with the Electric Distribution System, and is intended primarily to offset part or all of the Customer’s requirements for electricity.

The Generation Facility qualifies for the Schedule as it is one of those facilities identified in the Schedule and restated above. Total rated output of the Generation Facility to be used under the Small Power Production Schedule, is \_\_\_\_ kW<sub>AC</sub>. The Customer acknowledges that it has read the Schedule and agrees to all terms and conditions contained therein, including without limitation those specified in the Interconnection Standards for Installation and Parallel Operation of Customer-Owned Renewable Electric Generation Facilities 10 kW<sub>AC</sub> or Less. Specifically, the Customer understands and agrees that a single meter capable of registering the flow of electricity in each direction must be in service at the facility. If a meter with this capability is not in service, the Customer must submit a written request to the Village to acquire, install, maintain, and read an approved meter at the Customer’s cost. All costs related to installation of said meter shall be borne by the Customer.

Customer acknowledges and agrees that operation of said Generation Facility is intended primarily to offset part or all of Customer’s electricity requirements, and that the Generation Facility is not sized to exceed the annual electric energy requirements of the Customer’s premises.



Requested By:

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Customer Name

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Authorized Signature

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Date

Approved By:

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Name

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Village Signature

---

Date

Rejected:

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Name

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Village Signature

---

Reason for Rejection

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Date

