



Member Initials: _____

MAQUOKETA VALLEY ELECTRIC COOPERATIVE

INTERCONNECTION AGREEMENT FOR DISTRIBUTED ENERGY RESOURCES (RATED 100 KW_{AC} OR LESS)

THIS AGREEMENT, made and entered into this ____ day of _____ (month), _____ (year), by and between Maquoketa Valley Electric Cooperative, an Iowa cooperative corporation with its principal place of business in Anamosa, Iowa (hereinafter called "Cooperative") and _____, a member located in _____ (county), Iowa (hereinafter called "Member"). Cooperative and Member are hereinafter collectively referred to as the "Parties" and individually as a "Party".

WITNESSETH:

WHEREAS, Cooperative is a public utility under Chapter 478 of the Code of Iowa and provides electric utility service at retail to members in its assigned service area; and

WHEREAS, Member is a member of Cooperative and purchases electric power and energy from Cooperative; and

WHEREAS, Member intends to install and operate a small power production and/or energy storage facility (hereafter called "Facility") with an alternating current nameplate rating of 100 kilowatts (kW) or less and desires to interconnect with the electric distribution system of Cooperative and possibly sell excess electric power and energy generated by Facility to the Cooperative; and

WHEREAS, this Agreement is not an endorsement of the Facility's design decisions and Cooperative does not assume any responsibility for protection of the Facility's equipment; and

WHEREAS, no agency or partnership is created between Cooperative and Member's Facility; and

WHEREAS, the Cooperative and Member desire to set forth in this Agreement the terms and conditions pursuant to which said purchases and interconnection shall be made;

IT IS, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS HEREINAFTER SET FORTH, AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:



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Interconnection Requirements

1. All distributed generation facilities shall meet certain requirements to be eligible for interconnection pursuant to the terms and conditions of this section. Permission to interconnect with the Cooperative electric system is contingent upon the following conditions:
 - a. The Member shall comply with acceptable standards for interconnection, safety, and operating reliability. Acceptable standards include the most current revisions of the following, as adopted in the Iowa Administrative Code (IAC) section 199-15.10(1) to be eligible for interconnection to the Cooperative's electric system:
 - i. Standard for Interconnecting Distributed Resources with Electric Power Systems. ANSI/IEEE Standard 1547. For guidance in applying IEEE 1547 the Cooperative may refer to:
 1. IEEE recommended Practices and Requirements for Harmonic Control in Electrical Power Systems – IEEE Standard 519; and
 2. IEC/TR3 61000-3-7 Assessment of Emission Limits for Fluctuating Loads in MV and HV Power Systems.
 - ii. Iowa Electrical Safety Code, as defined in 199 – Chapter 25.
 - iii. National Electrical Code, ANSI/NFPA 70.
 - b. The Facility shall be equipped with automatic disconnection upon loss of electric voltage supplied by the Cooperative. The Cooperative may test said disconnect feature with reasonable notice to the Member for the duration the interconnection is in place.
 - c. The Member shall furnish and install an overcurrent protection device on the Facility to automatically disconnect all ungrounded poles of the interconnection circuit in accordance to rules defined in the National Electric Code.
 - d. If the Facility produces a terminal voltage prior to the closure of the interconnection, it shall be provided with synchronism-check devices to prevent closure of the interconnection under conditions other than a reasonable degree of synchronization between the voltages on each side of the interconnection switch.

The Member shall furnish the Cooperative with a Certificate of Completion in order to verify that all conditions in Parts a, b, c, and d above are met. Cooperative approval is required before interconnection is permitted.



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2. Member shall comply with all applicable laws, rules and regulations governing the operation of the Facility throughout the duration of interconnection. Upon completing construction, the Member shall cause the Facility to be inspected by the local electrical inspection authority, who shall establish the Facility meets all Code requirements.
3. Member is responsible for the design of the Facility beyond the point of interconnection, following applicable Codes and good engineering practices.
4. In order to provide adequate safety to Cooperative's employees, Member shall furnish, install, own, and maintain a disconnection device that provides a visible break or opening on all ungrounded poles of the interconnection circuit between the Facility and the Cooperative's system in order that the Facility may be positively disconnected from Cooperative's system. Additional requirements:
 - a. The disconnection device shall be listed with a Nationally Recognized Testing Laboratory (NRTL) ganged, manual-operated, open-style disconnect switch.
 - b. The disconnect switch shall have an interrupting rating equal to or greater than the full load amperage of the system.
 - c. The switch shall have a withstand rating equal to or greater than the maximum operating voltage and fault current requirements of the Facility.
 - d. The switch shall be housed in an approved and properly grounded enclosure; which shall be secured with a padlock or other locking device.
 - e. The switch shall be capable of being locked in the open position.
 - f. The switch location shall be within 10 feet of the meter and within line of sight of the meter. For a large site with multiple buildings requiring electric service, the switch shall be within 30 feet of the meter and within line of site of the meter.
 - g. The switch shall be located at a height of between 30 inches to 72 inches above finished grade.
 - h. The switch shall not be located within 3 feet of Cooperative facilities, including but not limited to: poles, meter pedestals, transformers, etc.
 - i. The switch shall be labeled with a permanently attached placard with clearly visible letters that give the procedures and directions for disconnecting the Facility. A placard must also clearly indicate the open and closed positions of the switch. The placard(s) must be designed to withstand the environment for the duration of the anticipated operating life of the Facility.
 - j. Cooperative shall have access to the switch at all times without any special provisions or outside intervention. In an emergency situation, the padlock or other locking device may be cut in order for the switch to be reached by Cooperative employees. Member will be responsible for the replacement lock.
 - k. Cooperative shall have the option of installing a service transformer disconnect in lieu of the Member-furnished, open-style disconnect switch.



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5. Member shall provide and install a permanent placard identifying the presence and details regarding the Facility. The placard must be clearly visible from and no more than 10 feet from Cooperative's meter and identify the location of the disconnect device.
6. The Member shall be responsible for the installation and maintenance of power factor correction equipment required to maintain a minimum power factor of 95% (lagging and leading) at the point of interconnection at all times, or as directed by the Cooperative.
7. The Member shall be responsible for the installation and maintenance of equipment to ensure the frequency output of the Facility is within 59 Hertz to 61 Hertz at the point of interconnection at all times, unless otherwise directed by the Cooperative.
8. Operation of the Facility must not cause any reduction in the quality of service provided to other Members or interfere with the operation of the Cooperative's system. Member shall take such corrective action (i.e. filtering) as may be necessary in order to eliminate such condition, and/or shall reimburse the Cooperative for any costs incurred by the Cooperative in correcting or eliminating such conditions.
9. Member must receive prior written authorization from Cooperative before making any changes to Facility that may affect Cooperative's system. Changes must be documented through an updated Application and must comply with current Cooperative service rule requirements. This includes, but is not limited to: equipment ratings or operations, equipment protection, the visible disconnect, circuit design, or point of interconnection.
10. Cooperative has the right to open the disconnect device or otherwise disconnect service to the Member, without prior notice to Member, for any of the following reasons:
 - a) For scheduled outages, provided that the Facility is treated in the same manner as Cooperative's load customers;
 - b) For unscheduled outages or emergency conditions;
 - c) If the Facility does not operate in a manner consistent with this Agreement;
 - d) Improper installation or failure to pass the witness test;
 - e) If the Facility is creating a safety, reliability, or power quality problem;
 - f) The interconnection equipment used by the Facility is delisted by the NRTL that provided the listing at the time the interconnection was approved;
 - g) Unauthorized modification of the interconnection facilities or the Facility; or
 - h) Unauthorized connection to the Cooperative's electric system.
11. The Member shall permit Cooperative representatives to enter upon Member's property at any reasonable time for the purpose of disconnecting, inspecting or testing member's equipment, facilities or apparatus and the accuracy of the Cooperative's metering equipment, but such inspections shall not relieve the Member of the obligation to maintain the Member's facilities in satisfactory working order and in compliance with all current and appropriate standards and codes.



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12. The Cooperative will meter the Facility to obtain necessary billing data and to fulfill its recording requirements. The Cooperative shall have the right to install such additional equipment as it deems necessary for the collection of data for research purposes, which metering will be furnished and paid for by Cooperative. Cooperative shall read meters.
13. The Member may be required to reimburse the Cooperative for all costs of connection, disconnection, switching, metering, transmission, distribution, safety provisions, and administrative costs directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with the Facility to the extent the costs are in excess of the corresponding costs which the Cooperative would have incurred if it had not engaged in interconnected operations, but instead generated an equivalent amount of electric energy itself or purchased an equivalent amount of electric energy or capacity from other sources. Interconnection costs do not include any costs included in the calculation of avoided costs. All applicable charges to the Member would be estimated in advance.
14. Prior to interconnection, Member shall provide the Cooperative with proof that it has a current homeowner's insurance policy or other general liability policy which protects against damage claims resulting from 1) bodily injury, including wrongful death; and 2) property damage arising from Member's ownership and/or operation of Facility. A policy must carry at least \$300,000 per occurrence or otherwise prove financial responsibility by another method accepted in writing by Cooperative. Failure of Member to maintain the required insurance or proof of financial responsibility shall be cause for disconnection.
15. The Member shall notify local fire departments via U.S. mail with information pertaining to the Facility pursuant to Iowa Administrative Code Chapter 15 rules (199.15.10(7)). This information includes:
 - a. A site map showing: property address; Cooperative service point; Facility location; disconnect location; rapid shutdown location; battery disconnect(s), if applicable; property owner's or owner's representative's emergency contact information; Cooperative's emergency telephone number; and size of the Facility.
 - b. Information to access the disconnection device.
 - c. A statement from the owner verifying the Facility was installed in accordance with the current state-adopted National Electric Code.
16. The Member shall adopt a program of inspection and testing of the Facility and its associated facilities to determine necessity for repair or replacement. Periodic testing shall be as prescribed by the manufacturer but no less than once every five years. All interconnection-related protective functions shall be periodically tested, and a system depending upon a battery for trip power shall be checked and logged. The Member shall maintain test reports and shall make them available upon request by the Cooperative.



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Purchases from Member

Cooperative agrees to purchase from Member such excess capacity as may be generated by Member's Facility and which Member desires to sell to Cooperative. Payment for purchases from the Member pursuant to this contract shall be as follows:

The price(s) for purchases from Facility (as defined above) and with a design capacity of 100 kilowatts or less are described in Cooperative Tariff.

A Facility designed to provide minimal sales to Cooperative shall be excluded from all compensation from Cooperative. Member shall also accurately document this intent within the Interconnection Application form. Examples include but are not limited to: plug-in photovoltaic (PIPV) solar panels, energy storage systems (ESS), electric vehicles with "V2X" capability, microturbines, and microgrids.

Wheeling Option

Cooperative may provide a wheeling service to a Facility interconnected to its electric delivery system. Any charges for the wheeling of power will be determined by the Cooperative and in accordance with any applicable regulations. In addition, Cooperative reserves the right to refuse to wheel power where its existing facilities do not have adequate capacity and the member refuses to pay the costs to upgrade those facilities. If a qualifying distributed energy resource facility agrees, the Cooperative which would otherwise be obligated to purchase electricity from such facility may transmit the electricity to any other electric utility. Any electric utility to which such electricity is transmitted shall purchase such electricity under this subpart as if the facility were supplying electricity directly to such electric utility. The price for purchase by the electric utility to which such electricity is transmitted shall be adjusted downward according to the mutual agreement of the transmitting and receiving utilities, to reflect any wheeling line losses and shall not include any charges for transmission.

Agreement Termination

1. This Agreement will remain in effect until terminated and may be terminated under the following conditions:
 - a. By the Member: The Member may terminate this Agreement by providing written notice to the Cooperative. If the Member ceases operation of the Facility, the Member must notify the Cooperative.
 - b. By the Cooperative: The Cooperative may terminate this Agreement without liability to the Member if the Member fails to remedy a violation of terms in this Agreement within thirty (30) calendar days following notice, or such other date as may be mutually agreed upon in writing prior to the expiration of the thirty (30) calendar day remedy period. The termination date may be no less than thirty (30) calendar days



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- after the Member receives notice of its violation. The Cooperative may also terminate this Agreement if no excess generation has been sold to the Cooperative for a consecutive (12) month period. In said event, the Cooperative shall provide the member with (30) days written notice of its intent to terminate the Agreement.
2. In the event the Agreement is terminated, the Member shall immediately disconnect its Facility from Cooperative's system. In addition, Cooperative shall have the right to disconnect its facilities.
 3. This Agreement shall remain in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.
 4. This Agreement shall terminate upon the transfer of ownership of the Facility and/or of the property to which Facility is attached. Member shall:
 - a. Provide notice to Cooperative of the ownership transfer,
 - b. Provide new owner's contact information to Cooperative, and
 - c. Disconnect Facility and confirm disconnection to Cooperative.
 The new owner shall submit a new Application and execute a new Agreement before Facility can be reconnected to Cooperative's system.

Miscellaneous Terms and Conditions

1. This Agreement shall be subject to all applicable federal and state laws and regulations. Nothing in this Agreement is intended to affect any other agreement between the Cooperative and the Member.
2. The Member shall indemnify and defend Cooperative, Cooperative's directors, officers, employees, and agents from all claims, damages and expenses, including reasonable attorney's fees, to the extent resulting from the Member's negligent installation, operation, modification, maintenance, or removal of its Facility or interconnection facilities, or the Member's willful misconduct or breach of this Agreement. Cooperative shall indemnify and defend Member, Member's directors, officers, employees, and agents from all claims, damages and expenses, including reasonable attorney's fees, to the extent resulting from the Cooperative's negligent installation, operation, modification, maintenance, or removal of its interconnection facilities or electric system, or the Cooperative's willful misconduct or breach of this Agreement.
3. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of the Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, provided that



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in no event shall death, bodily injury or third-party claims be construed as indirect or consequential damages.

4. Each Party agrees to attempt to resolve all disputes regarding the provisions of the Agreement that cannot be resolved between the two Parties pursuant to the dispute resolution provisions found in Iowa Utilities Board Chapter 45 rules (199 IAC 45.12).
5. Any term used herein but not defined shall have the same meaning as the defined terms from Iowa Utilities Board Chapter 45 rules (199 IAC 45.1) with the exception "utility" shall refer to Cooperative.
6. The Parties may mutually agree to provide notices, demands, comments, or requests by electronic means such as e-mail. Absent agreement to electronic communication, or unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement shall be deemed properly given when receipt is confirmed after notices are delivered in person, delivered by recognized national courier service, or sent by first-class mail, postage prepaid, return receipt requested, to the contact information specified below:
 - a. If the notice is to Member: Use the contact information provided in the Member's Application Form. The Member is responsible for notifying Cooperative of any change to Member's contact information, including change of ownership.
 - b. If Notice is to Cooperative: Use the contact information provided below. Cooperative is responsible for notifying the Member of any change of the Cooperative contact information.

Maquoketa Valley Electric Cooperative
 109 North Huber Street
 Anamosa, IA 52205
 Phone: 319-462-3542
 Email: DG@mvec.com

7. The Cooperative is not responsible for any lost opportunity or other costs incurred by the Member as a result of an interruption of service.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day and year first above written.

Member: _____

Printed: _____

By: _____

Authorized Representative for Member

(Maquoketa Valley Electric Cooperative)

By: _____

Jeremy Richert
 CEO/Executive Vice President

Printed: _____