

EASTERN ILLINI ELECTRIC COOPERATIVE

REGULATION NO. 27

SUBJECT: Interconnection and Parallel Operation of Distribution Generation

OBJECTIVE:

To establish safety, reliability and economic standards for interconnection and parallel operation of distributed generation that encourage the development of member/owner-owned on-site electric generation facilities using renewable fuel sources designed primarily to offset the member/owner's electrical requirements while honoring the Cooperative's obligation to provide electricity to all member/owners on a cooperative basis.

DEFINITIONS:

"Cooperative" means the electric distribution Cooperative owning and operating the power lines delivering electrical power and energy to the premises of its consumer members within a defined geographic service territory.

"Requestor" means the member consumer or entity making an Interconnection Request.

Distributed generation (DG): Any generation built within close proximity to the generating member/owner's load regardless of generation capacity or energy source of such generation and includes, but is not limited to, the following:

- A. Small-scale environmentally friendly generators such as photovoltaic (PV), fuel cells, small wind turbines.
- B. Micro-turbines or reciprocating engines fueled by renewable fuels such as landfill gas or methane gas from digesters.
- C. Any qualifying facility (QF) under the Public Utility Regulatory Policies Act of 1978 (PURPA).
- D. Any on-site generation with less than 10 MW of capacity interconnected with distribution facilities.

Distributed Electricity Generation Facilities (DEGF) means a generating facility of any alternating current (AC) Nameplate Capacity which is also a Qualifying Facility (QF) as defined in the Cooperative's Regulation # 26A (Interconnection of and Service to Qualifying Facilities under Public Utility Regulatory Policies Act (PURPA)).

Eligible Renewable Electrical Generating Facility (EREGF) means a generator powered by solar electric energy, wind, dedicated crops grown for electricity generation, anaerobic digestion of

livestock or food processing waste, fuel cells or micro turbines powered by renewable fuels, or hydroelectric energy. For purposes of this regulation, an EREGF with a generator capacity of 10 kW or less is governed by The Cooperative's Regulation #26 (Net Metering and Cooperative Purchase of Excess Member Owned Generation Capacity).

Nameplate capacity: means the maximum electric energy production capability of a generator, specified in kilowatts, as stated on the generator device placard(s), nameplate(s), or in the manufacturer's specifications.

ANSI Standard C84.1: American National Standards Institute (ANSI) Standard C84.1 (2011) for "Electric Power Systems and Equipment – Voltage Ratings (60 Hz)", as amended and supplemented, at the time the interconnection request is submitted.

IEEE Standard 1547: The Institute of Electrical and Electronic Engineers, Inc. (IEEE) Standard 1547 (2003) "Standard for Interconnecting Distributed Resources with Electric Power Systems", as amended and supplemented, at the time the interconnection request is submitted.

IEEE Standard 1547.1: The IEEE Standard 1547.1 (2005) "Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems", as amended and supplemented, at the time the interconnection request is submitted.

UL Standard 1741: Underwriters Laboratories' standard titled "Inverters, Converters, and Controllers for Use in Independent Power Systems", November 7, 2005 edition, as amended and supplemented.

Witness test: For lab certified or field approved equipment, verification (either by an on-site observation or review of documents) by the Cooperative that the interconnection installation evaluation required by IEEE Standard 1547 Section 5.3 and the commissioning test required by IEEE Standard 1547 Section 5.4 have been adequately performed. For interconnection equipment that has not been lab certified or field approved, the witness test shall also include the verification by the Cooperative of the on-site design tests as required by IEEE Standard 1547 Section 5.1 and verification by the Cooperative of production tests required by IEEE Standard 1547 Section 5.2. All tests verified by the Cooperative are to be performed in accordance with the test procedures specified by IEEE Standard 1547.1.

Queue Date: the date and time corresponding to when the Cooperative deems an Interconnection Request complete and subsequently enters the queue for analysis.

Interconnection Request: Comprised of the form attached hereto as Attachment A – Application and Facilities Description and Electrical and remittance to the Cooperative of a non-refundable application fee. A Member Interconnection Application is not deemed active until the Member Interconnection Application has been date and time stamped indicating entry into the queue.

REGULATION:

- I. This interconnection regulation applies to Cooperative member/owners proposing to install and interconnect distributed generation (i.e., an EREGF or a DEGF) that:

- A. Are not subject to the interconnection requirements of Midwest Independent System Operator (MISO).
- B. Are designed to operate in parallel with the electric distribution system.
- C. Meet all applicable electrical codes and standards.

II. Processing Interconnection Requests

- A. Members or other entities seeking to Interconnect distributed generation shall submit to the Cooperative an Interconnection Request.
- B. The Interconnection Request will be reviewed by the Cooperative for completeness. Once deemed by the Cooperative to be complete, the Member Interconnection Application shall be executed. At that time, the fee associated with the Member Interconnection Application is remitted to the Cooperative. The Interconnection Request shall be date and time stamped by the Cooperative to indicate placement into the queue. A date and time stamped copy of the Interconnection Request shall be provided to the Member or entity initiating the Interconnection Request
- C. Interconnection Requests shall be evaluated for their impact on the electrical system of the Cooperative in the order of the Queue Date. No installation will be permitted that reduces reliability to other member/owners or causes voltage conditions on the system to be outside of the limits of ANSI C84.1 Range A. No installation will be permitted that is expected to produce objectionable harmonics on the system. Any mitigation required to resolve harmonic, reliability, or voltage problems created by a member/owner-owned generator will be completed and paid for by the member/owner.
- D. Within 10 business days of the Queue Date, the Cooperative shall perform the basic design evaluation of the Interconnection of the distributed generation regarding interaction with and effect upon the electrical system of the Cooperative.

If, during the basic design evaluation, the Cooperative determines that a detailed design evaluation is needed, then the Cooperative will initiate a Detailed Engineering Study Agreement, in the form of Attachment B, with the requestor. The requestor must then submit a deposit with the Cooperative prior to proceeding with the study. The deposit amount is determined by the fee schedule in the Cooperative's Regulation No. 21.

Within 25 business days of receiving the detailed study deposit, the Cooperative will determine and specify any enhancements to the electric system of the Cooperative necessary to accommodate the Interconnection.

- E. During the design evaluation phase, the Cooperative in its sole judgement will determine if there is a likelihood of material electrical impact to third-party utility electrical systems. If judged affirmatively, the Cooperative will notify the Requestor of the Cooperative's obligation to notify the third-party utility, and the right of the third-party utility to require their own analyses of impacts. The Cooperative will arrange for discussions with the third-party utility as required. The Requestor will be responsible for all costs related to the third-party utility analyses and will be required to arrange for any required payments to the third-party utility. In the event a third-party utility analysis is necessary, the subsequent schedule as depicted in this Section IV, "F." through "Q.", will be adjusted day-for-day as it corresponds to the completion of the third-party utility analyses.
- F. Within 5 business days of completion of the design evaluation phase, the Cooperative shall communicate in writing to the Requestor any added electrical elements, improvements, enhancements, systems, or other consequential additions, changes, or operational restrictions to the Cooperative electrical system necessary to accommodate the Interconnection. A commensurate budgetary estimate shall be prepared by the Cooperative at this same time. The Cooperative shall formally notify the Requestor in writing of this budgetary estimate and shall clearly state the Cooperative plans no further action at this time pending the execution of an Interconnection Construction Agreement.
- G. Within 5 business days of completion of the design evaluation phase, provided the Cooperative will incur no costs associated with the Interconnection, the Requestor shall be notified in writing whether the Interconnection Request has been approved by the Cooperative.
- H. Within 15 business days of completion of the design evaluation, provided there are costs to be incurred by the Cooperative to facilitate the Interconnection, the Requestor shall execute an Interconnection Construction Agreement in the form of Attachment C and place on deposit with the Cooperative an amount equal to 115% of the budgetary cost estimated for the Interconnection. Upon completion of the Interconnection related work, any unused funds shall be remitted to the Requestor along with an accounting of the costs incurred. It shall be the responsibility of the Requestor to pay the full and total cost of the Interconnection even if such amount is in excess of the deposit(s). As the Interconnection work progresses, should the actual costs be then forecast to exceed 115% of the full budgetary estimate on deposit with the Cooperative, the Cooperative shall request additional funds to be placed on deposit with the Cooperative. Failure by the Requestor to do so in the timeframe specified by the Cooperative may, based on the sole judgement of the Cooperative, result in the Cooperative temporarily ceasing all work on the Interconnection.
- a. Member's payment of Construction Costs shall be construed as aid to construction only, and member shall not acquire any ownership interest in the metering, wiring, safety devices, or other equipment installed by the Cooperative at member's site.

- I. Failure by the Requestor to place funds on deposit with the Cooperative in the timeframe specified plus an additional thirty days shall result in the Interconnection Request being cancelled and voided. A desire to renew the Interconnection Request later will be treated as an entirely new Interconnection Request.
- J. The third-party utility analysis may conclude added electrical elements, improvements, enhancements, systems, or other consequential third-party electric system additions, changes, or operational restrictions are necessary to accommodate the Interconnection. Arrangements with the third-party utility for payment of any related costs are the responsibility of the Requestor. The Cooperative will coordinate activities with the parties to the best of their ability, but explicitly does not warrant the process or outcome.
- K. At the sole discretion for the Cooperative, the Cooperative shall provide the Requestor with certain requirements and related specifications pertaining to the design and construction of the Interconnection as it regards the work required of the Requestor. Such specifications may include required electrical protection schemes, voltage coordination arrangements, or any other considerations in keeping with good utility practice including, but not limited to IEEE Standard 1547-2003 - Standard for Interconnecting Distributed Resources with Electric Power Systems, IEEE Standard 1547.1a-2015 - IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems - Amendment 1 and UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources.
- L. The Interconnection work on behalf of the Cooperative shall be completed in keeping with the normal and conventional work practices, hours, and priorities of the Cooperative. The Cooperative will not warrant a completion date.
- M. The Cooperative will notify the Requestor in writing of completion of the Interconnection work undertaken by the Cooperative. Notice of completion is not an authorization for energization of the distributed generation or the Interconnection by the Requestor.
- N. The Requestor shall formally notify the Cooperative in writing of completion of the Interconnection work required of the Requestor and, at the Cooperative's sole discretion, may be asked to provide a Certificate of Completion from a certified licensed electrician. The main electrical disconnect controlling the electrical interfacing of the distributed generation with the electrical system of the Cooperative shall remain open and locked. At this time, the Requestor shall provide the Cooperative with a certificate of insurance in the amount required in this regulation.
- O. Provided a third-party utility required certain work to be done to facilitate the Interconnection, the Requestor is responsible for obtaining a Certificate of

Completion from the third-party utility. The main electrical disconnect controlling the electric interfacing of the generation with the electrical system of the Cooperative shall remain opened and locked pending the receipt of the Certificate of Completion from the third-party utility.

- P. Subsequent to the Cooperative notifying the Requestor in writing of completion of the Interconnection work undertaken by the Cooperative, and within 10 business days of receipt of notice by the Cooperative of completion of Interconnection work by the Requestor and the third-party utility, if applicable, the Cooperative at its sole discretion may inspect the work of the Requestor at the point of the Interconnection. Upon satisfaction of the Cooperative, the Requestor shall execute an Agreement for Interconnection and Parallel Operation of Distributed Generation in the form of Attachment D.
- Q. Subsequent to the execution of Attachment D, the Agreement for Interconnection and Parallel Operation of Distributed Generation, the requestor will provide the cooperative with the following:
- a. the required certificate of insurance
 - b. phone number and address of a contact person(s) with knowledge of the Distributed Generation facility, its installation, the Interconnection, and having the authority to disconnect the facility at the request of the Cooperative in accordance with the provisions of the Agreement. Such person shall be referred to as the “Operator in Charge”.
- R. Cooperative shall then issue the Requestor in writing a formal Authorization to Energize in the form of Attachment E. Absent the Authorization to Energize, the main electrical disconnect controlling the electrical interfacing of the generation with the electrical system of the Cooperative shall remain open and locked.
- S. Any remuneration due either party as a direct result of the ongoing operations of the generation shall be as specified in the regulations of the Cooperative regarding Interconnection of and Service to Qualifying Facilities under Public Utility Regulatory Policies Act (PURPA) (Cooperative Regulation #26A).

III. Insurance Requirements

- A. Throughout the term of this agreement, the member/owner shall carry a liability insurance policy issued by a licensed insurance carrier with an A. M. Best rating of B+ or better that provides protection against claims for damages resulting from (i) bodily injury, including wrongful death; and (ii) property damage arising out of the member/owner’s ownership and/or operation of the distributed generation facility under this agreement and such policy will be primary and non-contributory.
- B. The limits of such policy shall be at least \$1,000,000 per occurrence for those member/owners with generation facilities. The member/owner shall provide a certificate of insurance containing a minimum 30 calendar days’ notice of

cancellation to the Cooperative prior to connection of the member/owner's facility to the Cooperative's system. Any Commercial/Industrial Class of Service Member/Owner shall provide the Cooperative with a Certificate of Insurance which names the Cooperative as a "Named Insured".

IV. Indemnification

The member/owner shall indemnify the Cooperative, its directors, officers, representatives, agents, and employees against all loss, damage, expense and liability to any persons, including member/owners, for injury to or death of persons or injury to property, including, without limitation, consequential damages, interest, punitive damages, fees and charges due the Cooperative from the member/owner in accordance with both applicable rate tariffs for the provision of electric service and the Cooperative's regulations, attorney's fees, court costs and expenses, proximately caused by the construction, ownership, interconnection, operation, or maintenance of, or by failure of, any of such member/owners' works or facilities used in connection with the operation of the generating facility. The member/owner will, upon the Cooperative's request, defend any suit asserting a claim covered by the agreement to indemnify.

V. Miscellaneous Requirements

- A. The Cooperative shall have free and unencumbered access to the DEGF, Interconnection, associated equipment, and the Member's premises at all times for any reasonable purpose in connection with this regulation.
- B. The Member shall not energize the Cooperative's system during any period of electricity service interruption. The Member's equipment must contain a disconnect device to which the Cooperative has access and which the Cooperative can lock in an open position to disconnect, for safety reasons, the Member's electric generating facility from the Cooperative's electric delivery system.
- C. Electric generation facilities may be disconnected by the Cooperative from its system whenever, in the sole opinion of the Cooperative, such action is required by an emergency, for reasons of personal or public safety, or it is believed in the sole judgement of the Cooperative the generation facility is causing an adverse impact on quality of electricity service. The Cooperative shall strive to provide reasonable notice to the Member prior to disconnection of the facility if possible, but is under no obligation to do so.
- D. The DEGF shall be subject to the Cooperative's requirements for maintaining voltage standards, the production of reactive power, phasing, and frequency.
- E. The Member shall pay all costs of the Interconnection including initial and future transmission, distribution, metering, service, and other facilities costs necessary to permit Parallel Operations with the Cooperative.

- F. Any auxiliary or reserve power service required by the Member must be arranged in accordance with the terms of the Cooperative's applicable regulations and rates as modified from time to time.
- G. The Cooperative shall have the right to inspect and approve all plans for parallel generation systems and the interconnection systems prior to initial operation or subsequent operation following modifications.
- H. The member/owner shall make any necessary changes or adjustments to the additional facilities being operated in parallel to eliminate interference on the Cooperative's distribution system.
- I. The member/owners shall pay all fees and costs associated with the interconnection. A fee schedule is listed in the Cooperative's Regulation No. 21 (Rates and Fees), and will include but are not limited to application, engineering design evaluations, and line extensions or distribution system improvements.
- J. In the event of a dispute, either party shall provide the other party with a written notice of dispute describing in detail the nature of the dispute. If the dispute has not been resolved within 14 calendar days after receipt of the notice, either party may request assistance from a reputable dispute resolution service for assistance in resolving the dispute. The service will select an appropriate dispute resolution venue, (such mediation, settlement judge, early neutral evaluation, or technical expert) to assist the parties in resolving their dispute. Each party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to dispute resolution services utilized in the attempt to resolve the dispute. If neither party elects to seek assistance from a dispute resolution service, or if the attempted dispute resolution fails, then either party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of this regulation.

Adopted: 02/19/08
Amended: 09/29/09
Amended: 10/27/10
Amended: 03/19/13
Amended: 02/26/19