

CITIZENS ELECTRIC CORPORATION  
Ste. Genevieve, Missouri

Board Policy No. 610A

SUBJECT: INTERCONNECTION OF DISTRIBUTED RESOURCES (IDR)

I. OBJECTIVE

To establish the Corporation's Interconnection of Distributed Resources (IDR) Policy and procedures so as to be in compliance with the applicable Rural Utilities Service (RUS) regulation found at 7 CFR Part 1730, Subpart C: "Interconnection of Distributed Resources".

II. CONTENT

A. As used in this Policy, "Distributed Resources" shall mean sources of electric power that are not directly connected to a bulk power transmission system, having an installed capacity of not more than 10,000 kW connected to the Corporation's electric power system through a point of common coupling. Distributed Resources include both generators and energy storage technologies of any type.

This Policy shall be applicable when the proposed interconnecting Distributed Resource falls outside the scope of Board Policy No. 610 because of the proposed energy source(s), installed capacity size (kW), or otherwise.

B. Each Distributed Resource interconnected pursuant to this Policy shall have a designated "Responsible Party" which shall mean the owner, operator or any other person or entity that is accountable to the Corporation for compliance with this Policy. The Responsible Party shall:

1. Agree to maintain appropriate liability insurance.
2. Be responsible for the Distributed Resources' compliance with all national, state and local government requirements and electric utility standards for the safety of the public and personnel responsible for utility electric power system operations, maintenance and repair.
3. Be responsible for the safe and effective operation and maintenance of the Distributed Resource facility.
4. Demonstrate that the Distributed Resource facility will be capably developed, constructed and operated, maintained and repaired.

C. The Corporation shall not be required to enter into purchase power arrangements with the owner of the Distributed Resources. The Corporation may establish a new rate classification for customers with Distributed Resources.

D. The Corporation shall make this Policy readily available to the public.

- E. The Corporation shall recover all costs from the Responsible Party incurred in connection with the application process and actual interconnection of the Distributed Resource. The Corporation may, at its discretion, require an application fee to be paid before reviewing an application for interconnection. In addition, the Corporation may require a non-refundable deposit before proceeding with the application or interconnection process. Such deposit shall be of a sufficient amount to ensure serious intent by the party requesting interconnection.
- F. No interconnection or operation of a Distributed Resource facility in parallel phase and synchronization with the Corporation's electric system shall occur without the Corporation's prior written approval.
- G. Interconnections made without approval from the Corporation shall result in immediate disconnection of the unauthorized interconnection.
- H. The Corporation's application process regarding IDR shall include a standard application setting forth the process for making application to interconnect, applicable fees, and a form of agreement to be used in conjunction with the interconnection of the Distributed Resource. Additional or supplemental agreements with the Responsible Party may be required and utilized on a case by case basis.
- I. The Corporation shall no less than once every five years reconsider the contents of this Policy and at such time make any updates to this Policy as deemed necessary by the Board of Directors.
- J. The Board of Directors hereby adopts the "Application and Agreement for Interconnection of Distributed Resources with Capacity of No More than 10,000 kW", attached hereto and incorporated herein by reference.

III. RESPONSIBILITY

The management and Staff of the Corporation are responsible for the administration of this Policy.

APPROVED:

/s/ Alvin A. Franke  
President of the Board

05/19/11  
Date

**Application and Agreement for Interconnection of Distributed Resources with Capacity of no More than 10,000 kW**

*CEC Use Only:*

RECEIVED ON: \_\_\_\_\_

BY: \_\_\_\_\_

**PROCEDURES:**

**I.** Complete all sections below, attaching all required documents, plans, diagrams, etc. as required by the applicable section(s) of this Application and Agreement and return to Mr. Thomas Borowiak, VP – Engineering, Citizens Electric Corporation, P.O. Box 311, Ste. Genevieve, Missouri 63670.

Once we receive your application, we will review your proposed interconnection. Before we approve your application, we will let you know if there are special steps, equipment or procedures you need to take to accomplish the requested interconnection. We may request additional information regarding your planned interconnection. You must designate on this agreement a Responsible Party who will be accountable to the Corporation for compliance with this Application and Agreement and all applicable policies of the Corporation. By signing this Application and Agreement, you agree to operate the interconnected Distributed Resource safely, maintain the unit properly, and maintain insurance as needed.

You can call us at anytime during the review process to find out the status of your application. If your application is not approved for any reason, we will explain the reason and be available to discuss your plans. Citizens Electric Corporation (the “Corporation”) will endeavor to respond to all completed applications in a timely fashion.

As part of our application review process, we will examine the ability of the Corporation’s electric distribution system to accept your proposed interconnected Distributed Resource. On certain parts of our system, we may need to replace existing equipment or add some new equipment in order to accommodate interconnection of the Distributed Resource. You will be responsible for the cost of all system upgrades and equipment and resulting labor costs prior to interconnection. We will advise you of the costs and seek your agreement before approving your application.

To recover the costs associated with the review of this application, the Corporation will require, at the time of submission of this application, a non-refundable application fee of \$0.05 per kW of Distributed Resource with a minimum charge of \$100. Additionally, the Corporation may, at its discretion, require the payment of all or a portion of the costs incurred as a result of the requested interconnection, including but not limited to aid to construction, before proceeding with the interconnection. Such deposit shall be of a sufficient amount to ensure serious intent by the party requesting interconnection.

**II.** Upon approval of this Application and Agreement and payment of any applicable fees, costs or aid to construction, the Corporation will interconnect the Distributed Resource to the Corporation’s electrical system within thirty (30) business days after the Distributed Resource is capable of being interconnected, as determined by the Corporation, unless the Responsible Party and the Corporation mutually agree to a different date.

**INTERCONNECTION REQUEST:**

**A. Responsible Party’s Information**

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

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

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

Service/Street Address of Distributed Resource (if different from above): \_\_\_\_\_

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

Daytime Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Cell Phone: \_\_\_\_\_ Emergency Contact Phone: \_\_\_\_\_

**B. Distributed Resource Information**

**TYPE OF GENERATOR/ENERGY STORAGE (as applicable)**

Photovoltaic \_\_\_\_\_ Wind \_\_\_\_\_ Microturbine \_\_\_\_\_  
Diesel Engine \_\_\_\_\_ Gas Engine \_\_\_\_\_ Combustion Turbine \_\_\_\_\_  
Other \_\_\_\_\_

.....  
**ESTIMATED GENERATOR RATING**

Generator Rating \_\_\_\_\_ (kW) Annual Estimated Generation \_\_\_\_\_ (kWh)

.....  
**DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION**

Give a general description of the proposed installation, including a detailed description of its planned location, the date you plan to operate the Distributed Resource, the frequency with which you plan to operate it, and whether you plan to operate it during on- or off-peak hours.

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**ADDITIONAL INFORMATION**

In addition to the items listed above, please attach a detailed one-line diagram of the proposed facility, all applicable elementary diagrams, major equipment (generators, transformers, inverters, circuit breakers, protective relays, etc.) specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the interconnection. Also describe the project's planned operating mode (e.g., combined heat and power, peak shaving, etc.), and its address or grid coordinates.

The Corporation may require Applicant to conduct additional studies regarding the effect and impact of the interconnected resource on the Corporation's system and may also require additional technical information from the Applicant before approving any interconnection.

**C. Installation Information**

County / City Permit Number (if applicable): \_\_\_\_\_

Person or Company Installing: \_\_\_\_\_

Contractor's License No. (if applicable): \_\_\_\_\_

Approximate Installation Date: \_\_\_\_\_

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

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

Daytime Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Cell Phone: \_\_\_\_\_ Emergency Contact Phone: \_\_\_\_\_

**D. Installation Compliance**

Qualified Professional Engineer

Who Will Inspect/Certify Installation: \_\_\_\_\_

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

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

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

**TERMS AND CONDITIONS:**

**E.** In addition to abiding by the Corporation's, rules, policies and regulations, the Responsible Party, by completing and signing this Application and Agreement, agrees to comply with the following specific terms and conditions:

**1. Required Documentation.** Responsible Party shall provide a site specific wiring diagram and the plans and specifications describing the interconnection facilities and submit them to the Corporation as set forth in this Application and Agreement.

**2. Binding Contract.** When this fully completed and executed Application and Agreement receives final approval from the Corporation, it shall become a binding contract and shall govern your relationship with the Corporation in regards to interconnection. All Applications and Agreements

receiving final approval from the Corporation must be acted upon by the Responsible Party within one year of the date of approval.

**3. Operation/Disconnection.** If it appears to the Corporation that at any time and in the reasonable exercise of its judgment, that operation of the Responsible Party's interconnected system is adversely affecting safety, power quality or reliability of the Corporation's electrical system, the Corporation may immediately disconnect and lock-out Responsible Party's interconnected system from the Corporation's electrical system. The Responsible Party shall permit the Corporation's employees and inspectors access during normal business hours and in all emergency situations to inspect, test and examine Responsible Party's interconnected system to determine if same is adversely affecting safety, power quality or reliability of the Corporation's electrical system.

**4. Costs of Additional Equipment.** Responsible Party shall, at their cost and expense, install, operate, maintain, repair and inspect and otherwise be fully responsible for Responsible Party's interconnected system. Responsible Party further agrees to pay or reimburse the Corporation for all costs of additional equipment necessary for the Corporation to interconnect the Responsible Party's interconnected system. The Corporation shall, in its sole discretion, determine the specific type of equipment necessary for the Corporation to interconnect the Responsible Party's interconnected system.

Responsible Party's payment or reimbursement of the Corporation's costs for additional equipment shall be construed as aid to construction only, and Responsible Party will not acquire any ownership interest in any equipment installed by the Corporation in conjunction with Responsible Party's interconnected system. All such additional equipment shall be owned and maintained by the Corporation.

The Corporation may install and maintain, at its expense, load research metering for monitoring the Responsible Party's energy generation and usage and thereafter use or disclose to others all data collected in any manner deemed appropriate by the Corporation.

**5. Severability.** If any portion or provision of this Application and Agreement is held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion shall be deemed separate and independent, and the remainder of this Application and Agreement shall remain in full force and effect.

**6. Counterparts.** This Application and Agreement may be signed and executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute but one and the same instrument.

**7. Corporation's Limited Liability.** With respect to the Corporation's interconnection of Responsible Party's interconnected system, equipment and services provided by the Corporation pursuant to this Application and Agreement, the Corporation's liability shall be limited to claims, losses, costs and expenses that result from the Corporation's gross negligence or other willful misconduct, shown by clear and convincing evidence, in connection with the operation or maintenance of its electric distribution system.

**8. No Energy Sales to Corporation.** Responsible Party agrees that interconnection of the Responsible Party's interconnected system with the Corporation's electrical system does not grant Responsible Party the right to export power, nor does it constitute an agreement by the Corporation to purchase power or wheel Responsible Party's excess power. If the Responsible Party wishes to export power, separate agreements must be in place for power purchase and for wheeling. The Corporation may, at its discretion, establish a new rate classification for a customer with interconnected Distributed Resources.

**9. Terms and Termination Rights.** This Application and Agreement becomes effective when signed by all parties hereto, and shall continue in effect until terminated. Thereafter, Responsible Party or the Corporation may terminate this Application and Agreement at any time by giving at least thirty (30) days prior written notice. In such event, Responsible Party shall, no later than the date of termination of the Application and Agreement, completely disconnect Responsible Party's interconnected system from parallel operation with the Corporation's electric distribution system. A representative of the Corporation shall be present to witness the disconnection of the Responsible Party's interconnected system or thereafter have the right to examine the Responsible Party's interconnected system so as to verify that it has been physically disconnected from the Corporation's electrical system. This Application and Agreement may also be terminated at any time by mutual written agreement of the parties hereto.

**10. Transfer of Ownership.** If ownership or operational control of Responsible Party's interconnected system transfers to any other party than Responsible Party, a new Application and Agreement must be completed by the person or persons taking over ownership or operational control of the existing Responsible Party's interconnected system. The Corporation shall be notified in writing no less than thirty (30) days before Responsible Party anticipates transferring ownership or operational control of Responsible Party's interconnected system. The person or entity taking over operational control of Responsible Party's interconnected system must receive written authorization from the Corporation before the existing Responsible Party's interconnected system can remain interconnected with the Corporation's electrical system.

**11. Maintenance and Operation.** Responsible Party agrees to maintain their system and facilities in accordance with applicable manufacturer's recommended maintenance schedule and standard prudent engineering practices. Responsible Party covenants and agrees to operate their system, facilities and equipment so as to minimize the likelihood for a malfunction or other disturbance, damaging or otherwise affecting or impairing the Corporation's electrical system. Responsible Party shall comply with all applicable laws, regulations, zoning, building codes, safety rules and other environmental regulations or restrictions applicable to the design, installation, operation and maintenance of the Responsible Party's interconnected system.

Responsible Party must, at least once every year, conduct a test to confirm that Responsible Party's interconnected system automatically ceases to energize the output (interconnection equipment output voltage goes to zero) within two (2) seconds of being disconnected from the Corporation's electrical system. Disconnecting the Responsible Party's interconnected system from the Corporation's electrical system at the visible disconnect switch and measuring the time required for the unit to cease to energize the output shall satisfy this test. Responsible Party shall maintain a record of the results of these tests and, upon request by the Corporation, shall provide a copy of the test results to the Corporation. If Responsible Party is unable to provide a copy of the test results upon request, the Corporation shall notify Responsible Party by mail that Responsible Party has thirty (30) days from the date Responsible Party receives the request to provide the Corporation with the results of a test. If Responsible Party does not provide the Corporation with the test results within the thirty (30) day time period or if the test results provided to the Corporation show that Responsible Party's interconnected system is not functioning correctly, the Corporation may immediately disconnect Responsible Party's interconnected system from the Corporation's electrical system. If Responsible Party's equipment ever fails this test, Responsible Party shall immediately disconnect Responsible Party's interconnected system from the Corporation's electrical system. Responsible Party's interconnected system shall not be reconnected to the Corporation's electrical system by the Responsible Party until Responsible Party's interconnected system is repaired and operating in a normal and safe manner. The Corporation shall have the right to have a representative present and informed when any such tests are conducted. The Corporation does not warrant the testing procedures or results by the presence of its representative.

Responsible Party is responsible for protecting their equipment from transient high voltage spikes caused by lightning and/or transient low voltage conditions caused by faults or short circuits, and from any other causes or events. Therefore, the Corporation shall not be responsible for damage to Responsible Party's equipment allegedly caused by transient high voltage spikes caused by lightning and/or transient low voltage conditions caused by faults or short circuits or other causes or events.

Responsible Party agrees to notify the Corporation no less than thirty (30) days prior to modification of the components or design of the Responsible Party's interconnected system that in any way may degrade or significantly alter the interconnected system's output characteristics. Responsible Party acknowledges that any such modifications will require submission of a new Application and Agreement to the Corporation.

**12. Point of Interconnection.** The Point of Interconnection shall mean the point at which the Responsible Party's facilities for the Distributed Resource connect to the Corporation's system, all as set forth in detail in Appendix A, attached hereto and incorporated herein.

**13. Liability Insurance.** Responsible Party shall have insurance coverage of such types and amount to the satisfaction of the Corporation so long as the Responsible Party's system is interconnected with the Corporation's electrical system so as to provide coverage for all risk of liability for personal injuries (including death) and damage to property arising out of or caused by the operation of Responsible Party's interconnected system.

Responsible Party shall provide for the required coverage by contracting with a provider of liability insurance licensed to conduct business in the State of Missouri. Responsible Party will upon request furnish the Corporation with a certificate of insurance evidencing such coverage and naming the Corporation as an additional insured.

**14. Responsible Party's Liability and Indemnification.** Responsible Party shall assume all liability for and shall indemnify and hold harmless the Corporation and its affiliates, their members, trustees, directors, officers, managers, employees, agents, representatives, affiliates, successors and assigns from and against any claims, losses, costs and expenses of any kind or character to the extent they result from Responsible Party's negligence or other wrongful conduct in connection with the design, construction, installation, operation or maintenance of the Responsible Party's interconnected system. Such indemnity shall include, but is not limited to, financial responsibility for monetary losses, reasonable costs and expenses of defending an action or claim, damages related to death or injury, damages to property, and damages for the disruption of business.

**F. Responsible Party Acknowledgement:**

**I have fully read, understand, and accept all provisions, terms and conditions set forth in this Application and Agreement. Furthermore, I agree not to operate the Distributed Resource System in parallel with the Corporation's electrical distribution system until this Application and Agreement has been approved in writing by the Corporation.**

Signed (Responsible Party): \_\_\_\_\_ Date: \_\_\_\_\_

Title (if applicable) \_\_\_\_\_

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**APPENDIX A**

*(Description and/or diagram of point of interconnection)*

**G. Pre-Construction Certification**

I, \_\_\_\_\_ (print name), the undersigned, a professional engineer do hereby certify that:

The Responsible Party’s proposed interconnection complies with all applicable National Electrical Safety Code (NESC), National Electric Code (NEC), Institute of Electrical and Electronics Engineers (IEEE) and Underwriters Laboratories (UL) requirements for electrical equipment and their installation. As applicable to the interconnected system, these requirements include, but are not limited to, IEEE 1547TM—Standard for Interconnecting Distributed Resources with Electric Power Systems, approved June 12, 2003, and IEEE 1547.1TM—Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems, approved June 9, 2005. The proposed interconnection complies with all applicable state regulations, local electrical codes and all reasonable safety requirements of the Corporation. The proposed interconnected system has a lockable, visible, manual disconnect device, clearly marked “Distributed Resource Disconnect” accessible at all times to the Corporation’s personnel located at the metering point or other location mutually agreed to between Responsible Party and the Corporation. In addition to the one lockable, visible disconnect device, the Distributed Resource has a functioning mechanism that automatically disables the Responsible Party’s interconnected system and interrupts the flow of electricity back onto the Corporation’s distribution system in the event that electrical service to the Responsible Party is interrupted, thereby preventing the possibility of back-feed.

The Responsible Party’ proposed interconnected system has functioning controls as specified by IEEE and UL standards, including, but not limited to, control to prevent voltage flicker, DC injection, over voltage, undervoltage, overfrequency, underfrequency, and overcurrent, and to provide for the system’s synchronization to the Corporation’s electrical system. The proposed interconnected system does have an anti-islanding function that prevents the generator from continuing to supply power when the Corporation’s electric system is not energized or operating normally. If the proposed interconnected system is designed to provide uninterruptible power to critical loads, either through energy storage or back-up generation, the proposed interconnected system includes a parallel blocking scheme for this backup source that prevents any backflow of power to the Corporation’s electrical system when the electrical system is not energized or not operating normally.

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

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

License # \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Issued by: \_\_\_\_\_

**H. Post-Construction Certification**

I, \_\_\_\_\_ (print name), the undersigned, a professional engineer do hereby certify that the Responsible Party’s interconnected system referenced herein and now fully constructed satisfies all requirements noted in Section G., as set forth above.

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

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

License # \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Issued by: \_\_\_\_\_

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**I. Approval of Application and Agreement.** The Corporation does not, by approval of this Application and Agreement, assume any responsibility or liability for damage to property or physical injury to persons due to malfunction of Responsible Party's interconnected system or Responsible Party's negligence or willful misconduct.

**This Application and Agreement is approved by:**

CITIZENS ELECTRIC CORPORATION

Representative Name and Title (print): \_\_\_\_\_

Signature of Representative: \_\_\_\_\_

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

WABASH VALLEY POWER ASSOCIATION, INC.

Representative Name and Title (print): \_\_\_\_\_

Signature of Representative: \_\_\_\_\_

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

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