



# **Interconnection Process and Guide for Small Power Generation Systems**

**As Adopted by the Board of Directors  
South Central Indiana REMC  
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**SOUTH CENTRAL INDIANA REMC**

**MEMBER MANUAL**

**FOR THE INSTALLATION OF**

**SMALL POWER GENERATION SYSTEMS**

In some cases, cooperative members may be interested in installing their own electric power generation equipment. For members who are interested in interconnecting their power generation equipment with the Cooperative's electric distribution system, the Cooperative's staff is available to work with them to ensure their generation equipment is installed in a proper and safe manner and in accordance with all applicable codes, standards, regulations, laws, and insurance requirements. Members may also need to coordinate the installation and approval of their system installation with the local code inspection authority.

Attached is information and guidelines to assist our members in the planning, installation, and operation of small power generation systems up to a maximum of 50 KW. SCI has an all-requirements wholesale power supply contract with Hoosier Energy which precludes SCI from interconnecting with generation systems in excess of 50 KW or which would increase SCI REMC's member generation above 1% of SCI REMC's peak load during the previous 12 months. In the above-mentioned instances, SCI will assist the member in working with Hoosier Energy regarding interconnection of their generation equipment with Hoosier Energy's system and facilities.

The application and approval process is as follows:

1. Review the attached *Member Requirements for Installation and Interconnection of Small Power Generation Systems 50 KW or Less*.
2. Complete the appropriate parts of the *Application for Operation of Member-Owned Small Power Generation Systems* and submit the completed application to SCI.
3. Once the application has been approved by SCI, complete the *Interconnection Agreement*, and submit it to SCI.
4. SCI will notify you once your Interconnection Agreement has been approved.
5. SCI will inspect your installation prior to authorizing you to interconnect to SCI's distribution system.
6. You will also be required to provide proof of insurance prior to interconnecting your generating system.

Our staff will work closely with you to assure the interconnection process goes as smoothly as possible. Questions regarding the application process should be addressed to the System Engineer, South Central Indiana REMC, 300 Morton Avenue, Martinsville, Indiana 46151. The System Engineer can be reached by phone at 765-352-4750 or 800-264-7362 and by e-mail at [johnc@sciremc.com](mailto:johnc@sciremc.com).



## **SOUTH CENTRAL INDIANA REMC**

### **Member Requirements for Installation and Interconnection Of Small Power Generation Systems of 50 KW or Less**

*South Central Indiana REMC (SCI) is available to assist members who are interested in installing and interconnecting their own small electric power generation equipment with the Cooperative's electric distribution facilities. The following are requirements for the equipment and installation necessary to assure the compatible operation of small power generation systems of 50 KW or less to be operated in parallel with SCI's distribution system. Power generation systems larger than 50KW are required to meet the interconnection requirements of SCI's wholesale power supplier, Hoosier Energy. SCI will assist members in making the appropriate contacts with Hoosier Energy.*

#### **A. Application Process for Small Power Generation Systems**

1. Complete Parts 1 and 2 of Application for Operation of Member-Owned Small Power Generation Systems.
2. SCI will examine the application and planned installation for the sole purpose of assuring the safety of SCI's distribution system and facilities, members and employees. SCI may disapprove the application and planned installation in whole, or in part, to the extent the planned installation does not adequately assure the safety of SCI's distribution system, facilities, members and employees or causes SCI REMC to violate existing agreements with its wholesale supplier.
3. Upon approval of the application the Member will be required to sign an *Interconnection Agreement* per item B. If after approval of the application any changes are made to the planned installation, the Member shall be required to provide SCI with documentation showing the proposed changes and obtain re-approval.

#### **B. Interconnection Contract**

For Small Power Generation Systems up to 50KW, the attached *Interconnection Contract* must be completed and executed by the Member; and submitted to SCI for approval prior to installation.

#### **C. Safety and Equipment Requirements**

1. The Small Power Generation System installation must comply with the requirements of the current National Electric Code (NEC), National Electric Safety Code (NESC), *IEEE 1547-2018 Standard*, and other applicable National, State, and local codes and ordinances, and SCI's Service Rules.
2. The Member shall furnish and install at the Small Power Generation System's interface (*Point of Distributed Energy Resource Connection, i.e. PoC*) with SCI's facilities a manually operated safety disconnect device with load break capability. This device shall have a visible open circuit clearance, shall be accessible to SCI at all times, and shall be secured with a padlock provided by SCI.

3. The Member's installation shall include protection that is compatible and coordinates with SCI's system protection so that faults on the Member's system do not cause outages or disturbances to SCI's system.
4. The Member's installation shall include protection capable of sensing any type of fault or outage on the interconnection and must isolate the Member's power system from SCI's system and other SCI members.
5. The Member is responsible for the protection of their Small Power Generation System from faults and other disturbances on SCI's system.
6. The installation must include an inverter that meets the requirements of IEEE 929, "Recommended Practice for Utility Interface of Photovoltaic (PV) Systems" and Underwriters Laboratories (UL) 1741, "Standard for Static Inverters and Charge controllers for Use in Photovoltaic Power Systems." Adherence to these standards ensures:
  - a. Fixed voltage and frequency trip settings.
  - b. An integral anti-islanding scheme.
  - c. Disturbance "ride-through" capability.
  - d. System stability capability through Volt/Var Management
  - e. Total harmonic current distortion less than 5% of the fundamental frequency current at rated inverter output.

#### D. Parallel Operation and Inspection

1. The Member shall be responsible for operating the Small Power Generation System and all associated facilities except as hereafter specified. The Member shall maintain the Small Power Generation System in synchronization with the Cooperative's distribution system.
2. The Member shall be responsible for the installation, maintenance, and operation of all generating equipment and facilities installed at the site. Such equipment and facilities shall include but are not limited to: (a) protective equipment between the small power system and the Cooperative's system, (b) all necessary control equipment to synchronize frequency and voltage between the two systems, (c) all necessary equipment and settings to maintain an acceptable power factor, and (d) equipment settings necessary to perform "cease to operate" upon loss of voltage or identification of a fault; and disconnection from the distribution network. The Small Power Generation System's voltage and frequency at the PoC will be the same as the Cooperative's system voltage and frequency. Additionally, the Small Power Generation System's power factor at the PoC shall be .99 or greater and, under no circumstances, operate with a leading power factor.
3. If SCI is required to construct facilities different than otherwise would be required to permit interconnection, the Member shall pay such additional cost of facilities.
4. The Member shall designate an "Operator in Charge" for the purpose of contact and communication with SCI regarding the operation of the Small Power Generation System.
5. SCI will have the continuing right to inspect and approve the Member's Small Power Generation System, and to request and witness any tests necessary to

determine that such facilities are installed and operating properly; however, SCI will have no obligation to inspect or approve the Small Power Generation System, or to request or witness tests, and SCI will not in any manner be responsible for operation of the Small Power Generation System. The Member shall notify SCI at least three (3) days in advance of any scheduled test. SCI reserves the right to require a system test if the Member's Small Power Generation System installation causes a disturbance which adversely affects service to SCI's members. SCI will require that the Small Power Generation System be isolated while any corrective action is taken by the Member.

6. SCI reserves the right to curtail purchases from the Small Power Generation System when (a) the purchase will result in costs to SCI that are greater than would occur if the purchase was not made, and (b) SCI has a system emergency and purchases would or could contribute to such emergency.

#### E. Indemnification and Liability Insurance Requirements

1. The Member assumes all responsibility for the electric service upon Member's premises at and from the point of any delivery or flow of electricity from SCI, and for the wires and equipment used in connection therewith; and Member will protect and save SCI harmless from all claims for injury or damage to persons or property, including but not limited to property of Member, occurring on or about Member's premises or at and from the point of delivery or flow of electricity from SCI, occasioned by such electricity or said wires and equipment, except where said injury or damage is proven to have been caused solely by the negligence of SCI.
2. The Member will (a) pay the Cooperative for all damages to SCI's equipment, facilities, or distribution system, and (b) save and hold SCI harmless from all claims, demands and liabilities of every kind and nature for injury or damage to, or death of, persons and/or property of others, including costs and expenses of defending against the same, arising in any manner in connection with Member's Small Power Generation System or the operation thereof.
3. The Member, at their own expense, shall secure and maintain in effect while interconnected to SCI's distribution system liability insurance with a combined single limit for bodily injury and property damage of not less than \$500,000.
4. A Certificate of Insurance evidencing the requisite coverage shall be provided to SCI prior to interconnecting to SCI's distribution system. SCI shall be permitted to periodically obtain proof of current insurance coverage from the Member in order to verify proper liability insurance coverage. The Member will not be allowed to commence or continue interconnected operations unless evidence is provided that satisfactory insurance coverage is in effect.

#### F. Net Billing Rates and Procedures

1. SCI will utilize a net-billing process for all Small Power Generation Systems who interconnect with SCI's system. SCI will provide and maintain all metering equipment necessary to implement net-billing. Under the net-billing process, SCI will calculate on a monthly basis the amount due from the Member for all electric service provided by SCI to

the Member under the appropriate SCI Retail Rate Schedule. SCI will net against the amount due from the Member, an amount based on the electric service generated by the Member's Small Power Generation System based on SCI's Avoided Rate for Small Power Generation Systems, Rate Schedule SPGS. If the value of the generation service the Member provides to SCI is less than the value of the electric services SCI provided to the Member, the Member will pay SCI the net difference. If the value of the generation service the Member provides to SCI is greater than the value of the electric services SCI provided to the Member, the Member will receive a credit that can be used to reduce payments in future billing periods.

2. SCI will review Member's accounts annually and will reimburse in full accounts with credit exceeding \$100. If the Member discontinues operation of the Small Power Generation System, any remaining credits will be paid to the Member.