



Interconnection Process and Guide for Small Power Generation Systems

**As Adopted by the Board of Directors
South Central Indiana REMC
July 2007**

**South Central Indiana REMC
300 Morton Avenue
Martinsville, Indiana 46151
765-342-3344
800-264-7362**

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 15 KW. SCI has an all-requirements wholesale power supply contract with Hoosier Energy which precludes SCI from interconnecting with generation systems in excess of 15 KW. As a result, SCI can not interconnect with generation equipment larger than 15 KW. In those instances, SCI will assist the member in working with Hoosier Energy regarding interconnection of their generation equipment with Hoosier Energy's system and facilities.

We have developed a special accelerated application process for very small power generation systems. If your planned installation does not exceed 3 KW, you can utilize and are encouraged to use the accelerated application process.

The application and approval process is as follows:

1. Review the attached *Member Requirements for Installation and Interconnection of Small Power Generation Systems 15 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 either the *Short Form Contract* or *Long Form Contract*, as applicable to the system you are installing, and submit the completed contract to SCI.
4. SCI will notify you once your contract 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 Jack Hubbard, System Engineer, South Central Indiana REMC, 300 Morton Avenue, Martinsville, Indiana 46151. Mr. Hubbard can be reached by phone at 765-342-3344 or 800-264-7362 and by e-mail at jackh@sciremc.com.

SOUTH CENTRAL INDIANA REMC

Member Requirements for Installation and Interconnection Of Small Power Generation Systems of 15 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 15 KW or less to be operated in parallel with SCI's distribution system. Power generation systems larger than 15KW 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

1. Special accelerated application process for Small Power Generation Systems of 3 KW or less.
 - a. Complete Part 1 only of Application for Operation of Member-Owned Small Power Generation Systems.
 - b. 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.
 - c. Upon approval of the application, the Member will be required to sign a *Short Form Contract* 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.

2. Application process for Small Power Generation Systems greater than 3 KW and up to 15KW.
 - a. Complete Parts 1 and 2 of Application for Operation of Member-Owned Small Power Generation Systems.
 - b. 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.
 - c. Upon approval of the application the Member will be required to sign a *Long Form Contract* 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

1. As part of the special accelerated application process for Small Power Generation Systems of 3 KW or less, the attached *Short Form Contract* must be completed and executed by the Member and submitted to SCI for approval prior to installation.
2. Small Power Generation Systems greater than 3KW and up to 15KW, the attached *Long Form 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), 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 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. 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. The Small Power Generation System's voltage at the point of interconnection will be the same as the Cooperative's system voltage.
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. For Small Power Generation Systems up to 3KW, 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 \$100,00 for each occurrence. For Small Power Generation Systems larger

- than 3KW and up to 15KW, 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 affect.

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. If the Member discontinues operation of the Small Power Generation System, any remaining credits will be paid to the Member.

SOUTH CENTRAL INDIANA REMC

Application for Operation of Member-Owned Small Power Generation Systems

This application should be completed as soon as possible and returned to the Cooperative in order to begin processing the request. See Member Requirements for Installation and Interconnection of Small Power Generation Systems 15 kW or Less for additional information.

INFORMATION: *This application will be used by South Central Indiana REMC to determine the required equipment configuration for the Member interface. Every effort should be made to supply as much information as possible.*



PART 1

MEMBER/APPLICANT INFORMATION

Name: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Daytime Phone: _____ Evening Phone: _____

SCI Account Number: _____



PROJECT DESIGN/ENGINEERING (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____



ELECTRICAL CONTRACTOR (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____



TYPE OF GENERATOR

Photovoltaic _____ Wind _____ Microturbine _____

Diesel Engine _____ Gas Engine _____ Turbine _____

Other _____



ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION

The following information will be used to help properly design the interconnection. This information is not intended as a commitment or contract for billing purposes.

Total Site Load _____ (kW)

Residential _____ Commercial _____ Industrial _____

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 and when you plan to operate the generator. Attach a single-line diagram showing the planned installation.

PART 2

(Complete all applicable items. Copy this page as required for additional generators)

SYNCHRONOUS GENERATOR DATA

Unit Number: _____ Total number of units with listed specifications on site: _____

Manufacturer: _____

Type: _____ Date of manufacture: _____

Serial Number (each): _____

Phases: Single Three R.P.M.: _____ Frequency (Hz): _____

Rated Output (for one unit): _____ Kilowatt _____ Kilovolt-Ampere

Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____

Field Volts: _____ Field Amps: _____ Motoring power (kW): _____

Synchronous Reactance (X_d): _____ % on _____ KVA base

Transient Reactance ($X'd$): _____ % on _____ KVA base

Subtransient Reactance (X''_d): _____ % on _____ KVA base

Negative Sequence Reactance (X_s): _____ % on _____ KVA base

Zero Sequence Reactance (X_o): _____ % on _____ KVA base

Neutral Grounding Resistor (if applicable): _____

I_2^2t or K (heating time constant): _____

Additional information: _____

INDUCTION GENERATOR DATA

Rotor Resistance (R_r): _____ ohms Stator Resistance (R_s): _____ ohms

Rotor Reactance (X_r): _____ ohms Stator Reactance (X_s): _____ ohms

Magnetizing Reactance (X_m): _____ ohms Short Circuit Reactance (X_d''): _____ ohms

Design letter: _____ Frame Size: _____

Exciting Current: _____ Temp Rise (deg C°): _____

Reactive Power Required: _____ Vars (no load), _____ Vars (full load)

Additional information: _____

PRIME MOVER (Complete all applicable items)

Unit Number: _____ Type: _____

Manufacturer: _____

Serial Number: _____ Date of manufacturer: _____

H.P. Rated: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft.²

Energy Source (hydro, steam, wind, etc.) _____

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GENERATOR TRANSFORMER (Complete all applicable items)

TRANSFORMER (between generator and utility system)

Generator unit number: _____ Date of manufacturer: _____

Manufacturer: _____

Serial Number: _____

High Voltage: _____ KV, Connection: delta wye, Neutral solidly grounded? _____

Low Voltage: _____ KV, Connection: delta wye, Neutral solidly g rounded? _____

Transformer Impedance(Z): _____ % on _____ KVA base.

Transformer Resistance (R): _____ % on _____ KVA base.

Transformer Reactance (X): _____ % on _____ KVA base.

Neutral Grounding Resistor (if applicable): _____

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INVERTER DATA (if applicable)

Manufacturer: _____ Model: _____

Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____

Inverter Type (ferroresonant, step, pulse-width modulation, etc): _____

Type commutation: forced line

Harmonic Distortion: Maximum Single Harmonic (%) _____

Maximum Total Harmonic (%) _____

Note: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.

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POWER CIRCUIT BREAKER (if applicable)

Manufacturer: _____ Model: _____

Rated Voltage (*kilovolts*): _____ Rated ampacity (*Amperes*) _____

Interrupting rating (Amperes): _____ BIL Rating: _____

Interrupting medium / insulating medium (ex. Vacuum, gas, oil) _____ / _____

Control Voltage (Closing): _____ (Volts) AC DC

Control Voltage (Tripping): _____ (Volts) AC DC Battery Charged Capacitor

Close energy: Spring Motor Hydraulic Pneumatic Other: _____

Trip energy: Spring Motor Hydraulic Pneumatic Other: _____

Bushing Current Transformers: _____ (Max. ratio) Relay Accuracy Class: _____

Multi ratio? No Yes: (Available taps) _____

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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.

END OF PART 2

The Member agrees to provide the Cooperative with any additional information required to complete the interconnection. The member shall operate the equipment within the guidelines set forth by the cooperative.

Applicant Signature

Date

Printed Name

Street Address

City State Zip

PLEASE SUBMIT YOUR APPLICATION TO OUR SYSTEM ENGINEER AS FOLLOWS:

Jack Hubbard, System Engineer
South Central Indiana REMC
300 Morton Avenue
Martinsville, IN 46151
765-352-4745 (phone)
765-352-4845 (fax)
jackh@sciremc.com



**SOUTH CENTRAL INDIANA REMC
AGREEMENT FOR INTERCONNECTION OF
SMALL POWER GENERATION SYSTEMS**

SHORT FORM CONTRACT

This Interconnection Agreement (“Agreement”) is made and entered into this ____ day of _____, 20____, by South Central Indiana REMC, (“Cooperative”), a corporation organized under the laws of Indiana, and _____ (“Member”), each hereinafter sometimes referred to individually as “Party” or both referred to collectively as the “Parties”. In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1. **Scope of Agreement.** This Agreement is intended to provide for the safe and orderly interconnection and operation of the Member’s Small Power Generation Systems (“Generator”) located at _____ and the electrical distribution facilities owned and operated by the Cooperative. This Agreement does not supersede any requirements of any of the Cooperative’s articles of incorporation, by-laws, applicable rate schedules, rules and regulations as the same may be amended from time to time by the Cooperative (the “Rules”) and which shall be controlling in the event of a conflict between this Agreement and such Rules.

2. **Intent of Parties:** It is the intent of the Member to interconnect its Small Power Generation System to the Cooperative’s electrical distribution system. It is the intent of the Cooperative to operate its distribution system to maintain a high level of service to our members and to maintain a high level of power quality. It is the intent of both parties to operate their respective facilities in a way that ensures the safety of the Cooperative’s employees, members, and the general public.

3. **Operator in Charge:** The Member is responsible for establishing operating procedures and standards for the operation of its Generator and to designate an “Operator in Charge” who will be responsible for the safe and reliable operation of the Generator. The Member shall ensure that the Operator in Charge of the Generator is competent in the operation of the electrical generation system and is aware of the provisions of any operating agreements and regulations relating to the safe operation of electrical power systems. The Operator in Charge is the person identified by name or job title responsible for the real time operation of all electrical facilities related to the interconnection of the Generator owned by the Member.

The Operator in Charge for Member is:

Name: _____

Address: _____

Phone: _____

4. **Suspension of Interconnection:** It is intended that the interconnection should not compromise the Cooperative's electric distribution systems or violate the Cooperative's system protection or operational requirements. The operation of the Member's Generator and interconnection facilities and the quality of electric energy supplied by Member to the Cooperative shall meet the standards as specified by the Cooperative's Member Requirements for Installation and Interconnection of Small Power Generation Systems. If the operation of the Member's system or quality of electric energy supplied (in the case of power export) does not meet the standards as specified, then the Cooperative will notify the Member to take reasonable and expedient corrective action. The Cooperative shall have the right to disconnect the Member's system until compliance is reasonably demonstrated. Notwithstanding, the Cooperative may in its sole discretion disconnect the Member's Small Power Generation System from the Cooperative's distribution system without notice if the operation of the Small Power Generation System imposes a threat, in the Cooperative's sole judgement, to its electric distribution system, life and other property.

5. **Maintenance Outages:** Maintenance outages will occasionally be required on the Cooperative's system and the Cooperative will provide as much notice and planning as practical to minimize downtime. It is noted that in some emergency cases such notice may not be practical. Compensation will not be made for unavailability of Cooperative's facilities due to distribution system outages.

6. **Access:** Access to the Member's Generator and interconnection facilities is required at all times by the Cooperative for maintenance, monitoring and meter reading. The Cooperative reserves the right, but not the obligation, to inspect the Member's facilities.

7. **Liability and Indemnification:** 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 the Cooperative, 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 the Cooperative, occasioned by such electricity or said wires and equipment, except where said injury or damage is proved to have been caused solely by the negligence of the Cooperative.

The Member shall also indemnify, defend and hold the Cooperative, its employees, contractors, members and agents ("Indemnities") harmless from and against all damages, losses, costs, expenses, and claims, including attorneys fees, incurred by the Indemnities for injury or damage to persons or property, including but not limited to the property of the Cooperative,

which arise or result, directly or indirectly from the Member's ownership, operation and interconnection of the Member's Generator and interconnection facilities.

8. **Insurance:** The Member, at their own expense, shall secure and maintain in effect while interconnected to the Cooperative's distribution system liability insurance insuring Member's indemnification obligations under Section 7 above, with a combined single limit for bodily injury and property damage of not less than \$100,000 for each occurrence.

A Certificate of Insurance evidencing the requisite coverage shall be provided to the Cooperative prior to interconnecting to Cooperative's distribution system. The Cooperative shall be permitted to periodically obtain proof of current 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.

9. **Net-Billing Rates and Procedures:** The Cooperative will utilize a net-billing process for all Members with Small Power Generation Systems who interconnect with the Cooperative's system. The Cooperative will provide and maintain all metering equipment necessary to implement net-billing. Under the net-billing process, the Cooperative will calculate on a monthly basis the amount due from the Member for all electric service provided by the Cooperative to the Member under the appropriate SCI Retail Rate Schedule. The Cooperative 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 the Cooperative's Avoided Rate for Small Power Generation Systems, Rate Schedule SPGS. If the value of the generation service the Member provides to the Cooperative is less than the value of the electric services Cooperative provided to the Member, the Member will pay the Cooperative the net difference. If the value of the generation service the Member provides to the Cooperative is greater than the value of the electric services Cooperative provided to the Member, the Member will receive a credit that will be applied to future billing periods. If the Member discontinues operation of the Small Power Generation System, any remaining credits will be paid to the Member.

10. **Term:** This Agreement shall be effective upon execution by both Parties and shall continue in full force and effect so long as the Member's Generator is interconnected to the Cooperative's electric distribution system. This Agreement may be amended by the Cooperative without the consent of the Member upon 30 days prior written notice to the Member. This Agreement shall terminate on the date that the Member permanently de-installs its interconnection of its Generator with the Cooperative's system and provides notice thereof to the Cooperative, provided, however, any obligation contained herein which would naturally survive the termination of this Agreement, including but not limited to the Member's indemnification obligations, shall survive the termination of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date first above written.

MEMBER

SOUTH CENTRAL INDIANA REMC

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

**SOUTH CENTRAL INDIANA REMC
AGREEMENT FOR INTERCONNECTION OF
SMALL POWER GENERATION SYSTEMS**

LONG FORM CONTRACT

This Interconnection Agreement (“Agreement”) is made and entered into this ____ day of _____, 20____, by South Central Indiana REMC, (“Cooperative”), a corporation organized under the laws of Indiana, and _____ (“Member”), each hereinafter sometimes referred to individually as “Party” or both referred to collectively as the “Parties”. In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1. **Scope of Agreement.** This Agreement is intended to provide for the safe and orderly interconnection and operation of the Member’s Small Power Generation Systems (“Generator”) located at _____ and the electrical distribution facilities owned and operated by the Cooperative. This Agreement does not supersede any requirements of any of the Cooperative’s articles of incorporation, by-laws, applicable rate schedules, rules and regulations as the same may be amended from time to time by the Cooperative (the “Rules”) and which shall be controlling in the event of a conflict between this Agreement and such Rules.

This Agreement is applicable to circumstances under which the Cooperative and the Member agree that one or more Generators up to a maximum of 15 KW, as described in Exhibit A, is interconnected at _____KV or less to the Cooperative’s electric distribution system.

2. **Establishment of Point of Interconnection:** The point where the electric energy first leaves the wires or facilities owned by the Cooperative and enters the wires or facilities provided by the member is the “Point of Interconnection.” Cooperative and Member agree to interconnect the Generator at the Point of Interconnection in accordance with the Cooperative’s Member Requirements for Installation and Interconnection of Small Power Generation Systems, as well as the Cooperative’s Rules [which are incorporated herein by reference](#). The Generator installation must also comply with the requirements of the current National Electric Code (“NEC”), National Electric Safety Code (“NESC”), and other applicable National, State, and local codes and ordinances.

Responsibilities of Cooperative and Member for Installation, Operation and Maintenance of Facilities: Member will, at their own expense, install, operate, maintain, repair, and inspect, and shall be fully responsible for, the Generator, unless otherwise specified on Exhibit A. Member shall conduct operations of the Generator in compliance with all aspects of the Rules and in accordance with industry standard prudent engineering practices. Maintenance of the Generator shall be performed in accordance with the applicable manufacturers’ recommended maintenance schedule and procedures.

4. **Suspension of Interconnection:** It is intended that the interconnection of Member's Generator to the Cooperative's electric distribution system not compromise or damage the Cooperative's electric distribution system or violate its protection or operational requirements. The operation of the Member's Generator and interconnection facilities and the quality of electric energy supplied by Member to the Cooperative shall meet the standards as specified by the Rules. If the operation of the Member's Generator or quality of electric energy supplied (in the case of power export) does not meet the standards as specified, then the Cooperative will notify the Member to take reasonable and expedient corrective action. The Cooperative shall have the right to disconnect the Member's Generator until compliance is reasonably demonstrated. Notwithstanding, the Cooperative may in its sole discretion disconnect the Member's Generator from the Cooperative's distribution system without notice if the operation of the Generator imposes a threat, in the Cooperative's sole judgment, to the Cooperative's distribution system, or to life and other property.

Operator in Charge: The Member is responsible for establishing operating procedures and standards for the operation of its Generator and to designate an "Operator in Charge" who will be responsible for the safe and reliable operation of the Generator. The Member shall ensure that the Operator in Charge of the Generator is competent in the operation of the Generator and is aware of the provisions of any operating agreements and regulations relating to the safe operation of electrical power systems. The Operator in Charge is the person identified by name or job title responsible for the real time operation of all electrical facilities related to the interconnection of the Generator owned by the Member.

The Operator in Charge for Member is:

Name: _____

Address: _____

Phone: _____

Testing and Testing Records: The Member shall provide to the Cooperative all records of testing. Testing of protection systems shall be limited to records of compliance with standard acceptance procedures and by industry standards and practices. These records shall include testing at the start of commercial operation and periodic testing thereafter. Factory testing of pre-packaged Generators and the protective systems of small units shall be acceptable. In the case of a factory test, the Member needs to provide a written description and certification by the factory of the test, the test results, and the qualification of any independent testing laboratory. In addition, the settings of the equipment being installed are to be approved by the Cooperative prior to interconnection.

Access: Access is required at all times by the Cooperative to the Member's Generator for maintenance, monitoring and meter reading. The Cooperative reserves the right, but not the obligation, to inspect the Member's facilities.

Maintenance Outages: Maintenance outages will occasionally be required on the Cooperative's distribution system and the Cooperative will provide as much notice and planning as practical to minimize downtime. It is noted that in some emergency cases such notice may not be practical. Compensation will not be made for unavailability of Cooperative's distribution facilities due to distribution system outages.

9. **Disconnection of Facilities** – Member retains the option to disconnect its Generator from the Cooperative's distribution system, provided that Member notifies the Cooperative of its intent to disconnect by giving the Cooperative at least ten (10) days' prior written notice. Such disconnection shall not be a termination of this Agreement unless member exercises rights under Section 13.

10. **Net-Billing Rates and Procedures:** Cooperative will utilize a net-billing process for Generators interconnected with the Cooperative's distribution system. Cooperative will provide and maintain all metering equipment necessary to implement net-billing. Under the net-billing process, the Cooperative will calculate on a monthly basis the amount due from the Member for all electric service provided by the Cooperative to the Member under the appropriate Retail Rate Schedule. Cooperative will net against the amount due from the Member, an amount based on the electric service generated by the Generator based on the Cooperative's Avoided Rate for Small Power Generation Systems, Rate Schedule SPGS. If the value of the generation service the Member provides to the Cooperative is less than the value of the electric services the Cooperative provided to the Member, the Member will pay Cooperative the net difference. If the value of the generation service the Member provides to the Cooperative is greater than the value of the electric services Cooperative provided to the Member, the Member will receive a credit that will be applied to future billing periods. If the Member discontinues operation of the Generator, any remaining credits will be credited to the Member. If the Member leaves the service area of the Cooperative and is no longer provided electric service by the Cooperative, any remaining credits will be paid to the Member.

11. **Liability and Indemnification:** The Member assumes all responsibility for the electric service upon Member's premises at and from the Point of Interconnection and for the wires and equipment used in connection therewith; and Member will protect and save Cooperative 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 Interconnection or flow of electricity from Cooperative, occasioned by such electricity or said wires and equipment, except where said injury or damage is proved to have been caused solely by the negligence of the Cooperative. The Member will (a) pay the Cooperative for all damages to Cooperative's equipment, facilities, or distribution system, and (b) save and hold Cooperative 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 Generator or the operation thereof. The Member shall also indemnify, defend and hold the Cooperative, its employees, contractors, members and agents ("Indemnities") harmless from and against all damages, losses, costs, expenses, and claims, including attorneys fees, incurred by the Indemnities for injury or damage to persons or property, including but not limited to the property of the Cooperative, which arise or result, directly or indirectly from the Member's ownership, operation and interconnection of the Member's Generator and interconnection facilities.

12. **Insurance:** The Member, at their own expense, shall secure and maintain in effect while interconnected to the Cooperative's distribution system liability insurance insuring Member's indemnification obligations under Section 11 above, with a combined single limit for bodily injury and property damage of not less than \$500,000 for each occurrence. A Certificate of Insurance evidencing the requisite coverage shall be provided to the Cooperative prior to interconnecting to the Cooperative's distribution system. Cooperative shall be permitted to periodically obtain proof of current 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.

13. **Effective Term and Termination Rights:** This Agreement shall be effective upon execution by both Parties and shall continue in full force and effect so long as the Member's Generator is interconnected to the Cooperative's electric distribution system. This Agreement may be amended by the Cooperative without the consent of the Member upon 30 days prior written notice to the Member. This Agreement shall terminate on the date that the Member permanently de-installs its interconnection of its Generator with the Cooperative's system and provides notice thereof to the Cooperative, provided, however, any obligation contained herein which would naturally survive the termination of this Agreement, including but not limited to the Member's indemnification obligations, shall survive the termination of this Agreement. This Agreement may also be terminated as follows: (a) Cooperative may terminate upon failure by the member to generate energy from the Generator and deliver such energy to the Cooperative within six (6) months after completion of the interconnection; (b) Cooperative may terminate this Agreement by giving the Member at least thirty (30) days prior written notice that the other Party is in default of any of the terms and conditions of the Agreement or the Rules or any rate schedule, tariff, regulation, contract, or policy of the Cooperative, so long as the notice specifies the basis for termination and the default is not incurred within such thirty (30) day period; (c) Cooperative may terminate by giving Member at least sixty (60) days notice in the event that there is a material change in an applicable law, or any requirement of the Cooperative's wholesale power supplier or of any transmission utility, independent system operator or regional transmission organization having responsibility for the operation of any part of the Cooperative's distribution system..

14. **Compliance with Laws and Rules:** Both the Cooperative and the Member shall be responsible for complying with all applicable federal and state laws, rules and regulations. The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Rules, which Rules are hereby incorporated into this Agreement by this reference. The Cooperative shall have the right to change any of the Rules at any time.

15. **Severability:** If any portion or provision of this Agreement is held or adjudged for any reason 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 Agreement shall remain in full force and effect.

16. **Entirety of Agreement and Prior Agreements Superseded:** This Agreement, including the Rules and all attached Exhibits, which are expressly made a part hereof for all purposes, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the facilities of the Parties at the Points of Interconnection expressly provided for in this Agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the subject matter hereof not set forth or provided for herein or in the member application, or other written information provided by the Member in compliance with the Rules. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement.

17. **Assignment:** At any time during the term of this Agreement, the Member may assign this Agreement to a corporation, an entity with limited liability or an individual (the "Assignee") to whom the Member transfers ownership of the Generator; provided that the member obtains the consent of the Cooperative in advance of the assignment. The Cooperative's consent will be based on a determination that the Assignee is financially and technically capable to assume ownership and/or operation of the Generator. The company or individual to which this Agreement is assigned will be responsible for the proper operation and maintenance of the Generator, and must agree in writing to be subject to all provisions of this Agreement.

18. **Notices:** Notices given under this Agreement are deemed to have been duly delivered if hand delivered or sent by United States certified mail, return receipt requested, postage prepaid, to:

(a) If to Cooperative:

Jack Hubbard, System Engineer
South Central Indiana REMC
300 Morton Avenue
Martinsville, IN 46151
765-352-4745 (phone)
765-352-4845 (fax)
jackh@sciremc.com

(b) If to Member:

The above-listed names, titles, and addresses of either Party may be changed by written notification to the other, notwithstanding Section 18.

19. **Limitations (No Third-Party Beneficiaries, Waiver, etc.):** This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective duly authorized representatives.

SOUTH CENTRAL INDIANA REMC

MEMBER

BY: _____

BY: _____

Name: _____

Name: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

EXHIBIT A
LIST OF GENERATORS

Member will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible Generator unless otherwise specified on Exhibit A.

GENERATOR NUMBER _____

[The following information is to be specified for each Point of Interconnection, if applicable]

1. Name:
2. Generator location:
3. Delivery voltage:
4. One line diagram attached (check one):/ _____ Yes / _____ No
5. Facilities to be furnished by Cooperative:

6. Facilities to be furnished by Member:

7. Cost Responsibility:

8. Supplemental terms and conditions attached (check one): / _____ Yes / _____ No

9. Cooperative Rules for system interconnection attached (check one): / _____ Yes / _____ No

10. Appropriate rate schedules attached (check one): / _____ Yes / _____ No

SOUTH CENTRAL INDIANA REMC

MEMBER

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

SOUTH CENTRAL INDIANA RURAL ELECTRIC MEMBERSHIP CORPORATION

**AVOIDED RATE FOR SMALL POWER GENERATION SYSTEMS
RATE SCHEDULE - SPGS
EFFECTIVE JUNE 1, 2010**

Availability

Available to any consumer of the corporation with a Small Power Generation System (SPGS) up to a maximum of 15 KW contracting for parallel operation in accordance with the Cooperative's rules and regulations. The SPGS must be located adjacent to an electric line of the Cooperative that is adequate for the service to be provided by the SPGS.

Small Power Generation System

Small Power Generation System shall include any cogeneration or small production facility, including renewables, with a nameplate rating up to 15 KW.

Contract

The SPGS shall enter into a contract before operating any generating equipment electrically connected to the Cooperative's system.

Rate for Purchase of Energy

The Cooperative will purchase energy from the SPGS in accordance with the conditions and limitations of the contract at the following rate:

For all KWH supplied per month – on-peak	\$.0650 per KWH
For all KWH supplied per month – off-peak	\$.0340 per KWH

The on-peak period will be as follows:

12:00 PM to 10:00 PM EDT, Monday through Friday during the months of June, July, and August, excluding July 4th.

7:00 AM to 10:00 AM and 6:00 PM to 9:00 PM EST, Monday through Friday during the months of December, January, and February, excluding December 25th and January 1st.

The off-peak period will be all hours other than the on-peak hours described above.

In addition, a Power Cost Tracker as billed by the Cooperative's power supplier, will be added to or subtracted from the above rate. The energy will be measured by suitable integrating instruments which record date, time, KWh, and KW.

Rate for Purchase of Capacity (Avoided Cost)

The Cooperative will purchase capacity supplied from the Qualifying Facility during the Cooperative's peak period at the following rate:

Rate per KW month of capacity – June through November	\$9.85 per KW month
Rate per KW month of capacity – December through May	\$6.80 per KW month

During the months of June through November the peak period shall be defined as 11:00 AM to 9:00 PM EDT daily.

During the months of December through May the peak period shall be defined as 7:00 AM to 10AM EST or 6:00 PM to 9:00 PM EST daily

Parallel Operation

The Cooperative will permit a SPGS to operate in parallel with the Cooperative's distribution system per the Cooperative's *Member Requirements for Installation and Interconnection of Small Power Systems 15 KW or Less* and the appropriate *Agreement for Interconnection of Small Power Generation Systems*. The appropriate agreement must be executed prior to interconnection with the Cooperative's distribution system.

Maintenance, Supplementary and Backup Power

The Cooperative will provide all power required by its member for the Maintenance, Supplementary, and Backup Power requirements of the SPGS pursuant to the Cooperative's applicable retail rate schedule.

Interpretation of Schedule

The interpretation of or the application by the Cooperative or by any member of all rates, rules, and regulations included in this rate schedule shall be subject to review by the Board of Directors of the Corporation, consistent with its service rules and regulations or policies, except as otherwise provided by law.

Rate Schedule Modifications

All rate schedules and charges, as well as the Cooperative's service rules and regulations or policies, may be amended or modified, in whole or in part, at any time as deemed appropriate by the Corporation's Board of Directors.