



Consumer Handout Packet



January 27, 2010

Dear Southern Rivers Energy member-consumer:

Thank you for requesting information about interconnecting a photovoltaic (PV) generator to Southern Rivers Energy system. To assist our member-consumers, we have developed a streamlined process for the safe, reliable, efficient, and cost-effective interconnection of small renewable energy systems.

Our mission is to protect the safety of cooperative personnel and member-consumers, maintain the integrity and reliability of the grid, and establish mechanisms to ensure rate equity for all member-consumers. Because PV systems can affect the safety and reliability of the distribution system, we have developed technical interconnection rules that address those safety and reliability impacts. These rules ensure that we can continue to provide you and all other member-consumers with safe and reliable electricity service.

We are ready to help you by providing information and answering questions. We want to give you the tools you need to make an informed decision about a PV system.

In this packet, you will find the following documents:

- Interconnection information, including an interconnection application, a summary of the cooperative's interconnection process, a schedule of interconnection costs, and the cooperative's interconnection agreement.
- Information on rate schedules for consumers with their own generation, including the rates we pay for any net excess generation you may produce.
- Steps to a PV system, which will walk you through the various issues associated with a PV system.
- Questions you may want to ask PV installers before purchasing a PV system.
- Frequently asked questions (FAQs) and answers to these questions that member-consumers most often ask their cooperatives.

We look forward to working with you. If you have any questions, please don't hesitate to contact me at 770-358-1383 or rob.hall@southernriversenergy.com

Yours sincerely,

Rob Hall



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Capital Cost Recovery Resources

As interest in renewable energy grows, some cooperative member-consumers are considering the purchase of a PV system. If you are interested in installing a PV system to replace some of the electricity that your cooperative provides, talk with a cooperative representative about your plans.

Before you decide to buy a PV system, however, you should examine the economics to determine whether such a system will lower your monthly electricity costs. The Energy Matters Web site— <http://www.solar-estimate.org> —can help you determine the annual operating cost of a PV system.

Ten Steps to a PV System

Is a PV system right for you? These 10 steps will help you to decide.

1. Determine how much electricity you use and what it costs, both annually and by the kilowatt-hour. Then find ways to make your home more efficient and reduce your energy use.

Start by calculating your average electricity bill. Then conduct an energy audit of your home to identify ways of using energy more efficiently and reducing energy use. Implementing energy efficiency opportunities will almost always speed up the rate of return on your PV investment and additionally may enhance the viability of a PV system project by giving you the lower capital expense associated with a smaller system that will satisfy the new lower energy load. This could lower your electricity bill significantly. The National Rural Electric Cooperative Association (NRECA) recently reviewed several Web sites that host online energy audits. The review identified one Web site—Home Energy Saver—as among the best (<http://hes.lbl.gov>).

A home energy audit may be a good idea. It does not make sense to spend a significant amount of money on a PV system that will produce electricity to power inefficient lights, appliances, and electronics.

You may find additional helpful information at the Touchstone Energy website: <http://www.touchstoneenergysavers.com/homeSavings.html>



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2. Determine your solar resource.

The solar resource is the average amount of sunlight that reaches a given site. The greater the solar resource, the more electricity a PV system will generate.

A qualified PV installer can provide information on your solar resource. Alternatively, you can evaluate it using an online tool, such as PVWATTS Version 1 from the National Renewable Energy Laboratory, available at http://rredc.nrel.gov/solar/codes_algs/PVWATTS.

Several site conditions can influence PV performance—shade, roof condition, space required, orientation, and tilt. Shade is likely to have a greater impact on PV system performance than less-than-optimal PV module orientation and tilt (see below).

A qualified PV installer can use software tools to assess the degree of shading a proposed array will experience throughout the year and determine the best PV design.

3. Determine your site's suitability.

If your PV system is to be roof-mounted, the condition of the roof is important. The cost of repairs or a complete re-roofing will be substantially greater once the PV array is in place.

Another consideration is the space available for an array sized to meet your needs. In bright sunlight, a square foot of a PV module will produce approximately 10 watts of electricity. That's a helpful rule of thumb for estimating how much area you will need. A 1,000 watt (1 kW) PV system, for example, is likely to need 100–200 square feet of area, depending on the type of module used.

PV modules should be oriented geographically to maximize the amount of daily and seasonal solar energy. In general, the optimal orientation for a PV module in the northern hemisphere is true south. However, your modules can face up to 45° east or west of true south without significantly decreasing their performance. Orienting a system to face more to the west will benefit the utility. It does not help the homeowner, however, whose annual output will be lower.



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Most PV modules are mounted flat on the roof and so have the same tilt as the roof. The optimal tilt angle for maximizing annual energy production of PV modules is an angle equal to your latitude. Because most roofs are pitched at an angle less than the latitude, you and your installer will need to factor your roof angle into the performance calculations when sizing your system. Some roof-mounted systems can be adjusted for the sun's higher position in the sky in the summer and lower position in the winter.

Although most PV systems are roof-mounted, pole- and ground-mounting also are options. Both have more opportunities for incorporating tracking to maximize electricity production than do roof-mounted systems. A tracking device can increase the output by 25–40% over a stationary-mounted system. In addition, a pole-mounted system can be located far from shading and the array can be tilted and oriented in the best position. However, adjusting the tilt of a pole-mounted array for summer and winter sun may require at least two people.

Talk with a qualified PV installer about the best mounting option for your site.

4. Determine the size of the PV system.

Realistically, the size of your system is likely to be determined more by cost than by desired output. It makes sense, however, to estimate the amount of electricity that you want your PV system to produce. If cost is a constraint, the system could be installed in two phases.

Before determining the size of your PV system, it is advisable to adopt energy efficiency measures that will reduce your annual energy use and thus maximize the value of your PV system.

You can ask your PV installer to help determine the size of your system. You also can begin by calculating your electricity usage and the annual average peak solar hours at your site. A peak sun hour is the average amount of sunlight—summer and winter—available at your site. NREL publishes solar radiation resource maps that provide data on peak sun hours at http://rredc.nrel.gov/solar/old_data/nsrdb/redbook/atlas/.

Divide your annual electricity usage (in kWh) by the number of peak sun hours to determine the wattage needed for your system.

Alternatively, you can calculate your average daily electricity usage (in kWh) and refer to a chart that estimates the system size needed to reduce your electricity



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use by 25%, 50%, 75%, or 100%. See

<http://www.thesolarenergycompany.com/images/sizingPV/SizingChart.pdf>
for more information.

DOE provides an estimate of the area needed for variously sized PV systems—including 1 kW, 2 kW, 4 kW, and 10 kW systems—for various module efficiency, available at

http://www.energysavers.gov/your_home/electricity/index.cfm/mytopic=10840 .

5. Find out what incentives—rebates, tax credits, and loans—are available.

The Emergency Economic Stabilization Act of 2008 includes a residential solar investment tax credit provision. The provision extends the 30% investment tax credit (ITC) for residential solar property for eight years, through December 31, 2016. The provision also removes the cap on qualified solar electric property expenditures (previously \$2,000) for a system placed in service after December 31, 2008.

The Database of State Incentives for Renewables & Efficiency (DSIRE) provides detailed information on each state's incentives that apply to renewable energy systems, including PV. You can access the database at <http://www.dsireusa.org> . These incentives can reduce the installed cost of a PV system significantly. The DSIRE database provides detailed information on renewable energy tax incentives, loans, grants, and rebates available in each state.

6. Determine the estimated installed cost of the system and calculate return on investment.

PV systems are rated in kilowatts of DC generating capacity (kWdc), and tend to range in size from less than 1 kW to 10 kW. The average cost of an installed residential PV system typically ranges from \$8/watt to \$10/watt, depending on the size of the system, the region of the country, and the size and maturity of the PV market in that region. A recent study by DOE's Lawrence Berkeley National Laboratory identified a range of \$7.60/watt to \$10.80/watt. An average 2 kW system is likely to cost between \$16,000 and \$20,000. As a rule of thumb, the larger the system, the lower the per watt cost.

If you are considering the purchase of a battery bank, the cost will be higher. For a pole- or ground-mounted PV system, installation costs will be greater. In



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In addition, a tracking device on a pole-mounted system will boost the cost of your PV system. You can compare the cost-effectiveness of fixed mount and a single- or dual-axis tracking for your site at <http://rredc.nrel.gov/solar/calculators/PVWATTS> .

The payback for a PV system is the amount of time it takes for the system to pay for itself in energy savings. Depending on the level of government incentives, the payback period can range from fewer than 10 years to more than 20 years, depending on the cost of the system, the amount of electricity produced, and the retail price of electricity that you buy from your co-op.

You can calculate the simple payback of a PV system using the following formula:

Total of Life Cycle Costs (capital costs + finance costs + O&M costs - federal and state incentives) / Average Value of Energy Generated per Year (kWh generated * cost of power).

In addition, an online calculator is available at <http://www.solar-estimate.org> .

Note: The payback may be overestimated by using either the formula or the solar-estimate.org calculator if the system is dual-metered but not net metered.

7. Determine what zoning regulations apply to the installation of a PV system, if any, and what building and electrical permits are required. Talk with your neighbors about your plans.

Local zoning laws may restrict where you can place PV panels on your home. Check with your city or county to find out about any restrictions.

You may need to obtain a building permit to install a PV system. Building and electrical codes also may apply. Contact your local building department or ask your PV installer to include the cost of permits in the cost estimate.

After your PV system is installed, it must be inspected and approved by the local permitting agency (usually a building or electrical inspector) and your cooperative. Inspectors may require your installer to make corrections.



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At this stage, talk with neighbors about your plans and listen to any of their concerns. If there are any other PV system owners in your area, talk with them about any concerns their neighbors had and how they dealt with these concerns.

8. Ask your cooperative about its interconnection requirements, including costs and liability insurance.

If you have not already talked with your cooperative about your plans, do so now. Discuss the steps you have taken to get to this point and provide information on the PV system you are considering. You need to make sure that the system meets the cooperative's criteria for interconnection.

A copy of Southern Rivers Energy's Interconnection agreement can be found at the end of this information packet.

9. Find a PV system installer (if you haven't already done so).

Using a professional, licensed PV installer is the best way to avoid installation problems with your system. A qualified, experienced installer will design a system that meets your needs and site conditions. The installer also can help you with the paperwork for tax credits and rebates.

You might want to start looking for an installer by asking current PV system owners in your area for references. Several Web sites also provide listings of qualified installers. Among them are the American Solar Energy Society, at <http://www.findsolar.com/> ; Home Power magazine, at http://www.homepower.com/view/?file=HP116_pg102_IPP ; Energy Matters' Solar-Estimate at <http://www.solar-estimate.org/index.php?verifycookie=1&page=solar-installer&subpage=> ; and the North American Board of Certified Energy Practitioners (NABCEP), at <http://www.nabcep.org> . NABCEP, considered the most respected solar certification organization in the United States, has a certification program for PV installers. To be certified as a PV installer under NABCEP, an individual must have several years of installation experience and training and also take an examination.

Another option is to ask your state's renewable energy organization or energy office about installers. DOE's EERE Web site provides contact information for



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state energy offices, available at http://www.eere.energy.gov/state_energy_program/seo_contacts.cfm . Regional organizations, such as the Midwest Renewable Energy Association (MREA—<http://www.the-mrea.org>) may also be able to help. Also, check the local chapter of the Solar Energy Industries Association (SEIA) to find PV installers.

Both finding the installer who is right for you and establishing a good working relationship with that individual are essential to a successful PV project. Your cooperative can provide you with a PV information packet that includes a list of questions to ask prospective installers.

Once you have a short list of installers, contact at least two of them for quotes for the equipment and installation. Question any quote that appears to be too high or too low.

Some states link installation requirements to incentives. Check the DSIRE database for the requirements in your state, available at <http://www.dsireusa.org/solar/index.cfm?ee=1&re=1&spv=1&st=0> .

10. Contract for installation of your PV system.

Before actually placing an order, ask the installer for the names of consumers who have installed a similar PV system. Contact those consumers to ask about system performance, reliability, and support from the installer. Also ask if the system is meeting their expectations.

Ensure that the PV panel manufacturer offers at least a 20-year limited warranty and the inverter manufacturer offers a five-year limited warranty. The panels and inverter must be Underwriters Laboratories (UL) listed. Also ask the installer about a warranty for the work.

Questions to Ask PV Installers

Cooperative member-consumers interested in installing a PV system should ask installers or contractors the following questions:

1. What are your credentials? How long have you been in business? How many grid-connected PV systems have you installed?



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Look for installers that have been in business for at least five years. Installers certified by NABCEP must pass a rigorous examination and demonstrate that they possess a high degree of experience or education related to PV system design and installation.

In addition, you should ask the installer for a portfolio of recent residential projects and the names of at least two people who have had a PV system installed that is the same as, or similar to, the one you are considering.

2. What is the estimated total installed cost? What do the panels cost? What does the inverter cost? What is the estimated installation cost?

It is important to know the total installed cost of a PV system to ensure sufficient budgeting for the system. Budget for installation labor expenses, as well as the cost of equipment rental, construction materials, electrical components, shipping, and sales tax.

3. How long is the warranty? What does it cover? Parts? Labor? Can it be extended? If so, what will it cost?

The PV panel manufacturer should offer a 25-year warranty for crystalline modules and 20 years for thin films. Warranties for inverters should be for five years. Make sure the warranty covers all aspects of the removal, shipping, repair, and reinstallation of components. Cooperative member-consumers should ask owners of PV systems purchased from the same installer about performance and reliability before making a decision on an extended warranty, if it is available.

4. Are the PV panels and inverter UL-listed?

Both the PV panels and the inverter must be UL-listed. The State of Georgia requires that an inverter have a UL 1741 certification for interconnection with the grid. As part of the certification, the inverter is required to fail open in the absence of power on the grid.

5. Does the installer offer packaged systems?

Packaged systems, which include everything needed to generate electricity, can facilitate the interconnection process for the cooperative. Cooperative member-consumers should look for systems that are UL-listed and have been pre-certified. The cost of a grid-tied packaged system, uninstalled, depends on the



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system size. A 1 kW system is likely to cost between \$6,000 and \$8,000, while a 4 kW system can be expected to cost between \$20,000 and \$25,000.

6. If the system is to be roof-mounted, how will the installer mount it?

The performance of PV panels mounted flush on the roof will decrease during the winter if the roof is at a shallow pitch. Some installers may address this issue by adding one or two panels to the array. While the additional panels will compensate for the decreased winter performance, they also will significantly increase heat gain during the summer, reducing output.

Consumers may wish to consider alternatives, such as mounting panels at a greater angle on the roof or mounting the array on the ground or a pole.

7. What are the advantages and disadvantages of adjustable rack mounts and tracking devices?

Adjustable rack mounts—both ground and roof—can be repositioned seasonally to optimize energy output but they will increase the cost of a PV system. Consumers should ask the installer to estimate the improved performance of a system with adjustable rack mounts and then weigh the higher output against the increased cost.

Tracking devices—PV mounting devices that follow the sun—can increase the output of a PV system by 25% to 40%, compared with a fixed-mounted array. They are either electrically or thermally operated and usually are mounted on a pole. Trackers are most effective at sites with dawn-to-dusk sun, and provide a great increase in output in the summer. Because of their moving parts, trackers may require increased maintenance.

Although trackers increase the cost of a PV system, the total cost of a tracked system may be less than that of a fixed system because a smaller tracked system can produce more electricity. For example, a 3 kW tracked system can produce as much electricity as a 4 kW fixed system. The higher output of a tracked system makes it possible to scale down the size—and thus the cost—of the PV system.

Consumers should ask the installer to evaluate their site with a tool such as the Solar Pathfinder, available at <http://www.solarpathfinder.com>, to determine if a tracker makes sense.



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Legal Notice:

The Consumer Handout Packet was created for the benefit of NRECA members and their consumer-members as part of the CRN's Cooperative PV Solar Guide. Some of the contents of the Consumer Handout Packet is specific to Southern Rivers Energy.

This work contains findings that are general in nature. Readers are reminded to perform due diligence in applying these findings to their specific needs.

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Southern Rivers Energy

Distributed Generation Procedures and Guidelines Manual for Members

SR 906

Pages 1-35

APPROVED BY BOARD JUNE 27, 2008

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GENERAL

In order to receive service from Southern Rivers Energy, Inc., an Electric Membership Corporation, a customer must join or become a "Member" of Southern Rivers Energy, Inc., an Electric Membership Corporation. Throughout this DG Manual, Southern Rivers Energy, Inc., an Electric Membership Corporation will be referred to as the "Cooperative" and customers will be referred to as "Members." For more information about the cooperative membership application process, including any applicable membership fees or deposits, see the Cooperative to request new member information.

It is the intent of the Cooperative to allow Members to install Distributed Generation (DG), provided the Member's DG facility does not adversely affect the Cooperative. The Member must conduct his/her own analysis to determine the economic benefit of DG operation.

A DG facility that is not connected to the Cooperative's system in any way is known as "stand-alone" or "isolated" DG. The Member may operate a DG facility in stand-alone or isolated fashion as long as such DG facility does not adversely affect the Cooperative's system. A DG facility electrically connected in any way to the Cooperative's system shall be considered as in "parallel." For purposes of this DG Manual, a DG facility is considered operating in "parallel" anytime it is electrically connected to the Cooperative's system in any way, even if the Member does not intend to export power. All provisions of this DG Manual shall apply to parallel operation of DG facilities as so defined. Member shall fully comply with the provisions of this DG Manual, as same may be amended from time to time at the sole discretion of the Cooperative.

This DG Manual is not a complete description or listing of all laws, ordinances, rules and regulations, nor is this DG Manual intended to be an installation or safety manual. The Member requesting to interconnect a DG facility to the Cooperative's system is responsible for and must follow, in addition to all provisions of this DG Manual, the Cooperative's *Rules and Regulations and Tariffs for Electric Service*, the Cooperative's *Line Extension Policy*, the *Policies and Procedures* of the Cooperative's Power and/or Transmission supplier where applicable, the *Policies and Procedures* of the Cooperative's transmission service provider where applicable, the current *IEEE 1547 Standard Guide for Distributed Generation Interconnection* (a copy is on file at the Cooperative for inspection along with information so the Member may obtain his/her own copy), other applicable IEEE standards, applicable ANSI standards, including ANSI Standard C84.1 Voltage Range A and any other applicable governmental and regulatory laws, rules, ordinances or requirements. All DG equipment must be UL listed for its intended use. All legal, technical, financial, etc. requirements in the following sections of this DG Manual must be met prior to interconnection of the DG facility to the Cooperative's system.

A Member may serve all load beyond the meter at the location serving the DG facility but will not be allowed to serve multiple meters, multiple consuming facilities or multiple Members with a single DG facility or under a single DG application without prior written approval by the cooperative.

DG facilities larger than 10 MW are not covered by this DG Manual and will be considered by the Cooperative on a case-by-case basis.

I. DETERMINE THE CATEGORY OF DISTRIBUTED GENERATION FACILITY

1) Connection Level Category

- a) Connected to the Cooperative's system
The Member requests and/or the Member's DG facility require connection to the Cooperative's system. All provisions of this DG Manual cover this category.
- b) Connected to the Cooperative's Power and/or Transmission Supplier's system
The Member requests and/or the Member's DG facility require connection to the Cooperative's Power and/or Transmission Supplier's system. This DG Manual does NOT cover this category.

2) Power Export Category

- a) Parallel – no power export
The Member operates a DG facility connected in any way to the Cooperative system but with no intention to export power.
- b) Parallel – power generated to be both consumed and exported
The Member operates a DG facility connected in any way to the Cooperative's system designed primarily to serve the Member's own load but with the intention to export excess power.
- c) Parallel – power generated to be exported only
The Member operates a DG facility connected in any way to the Cooperative's system designed primarily with the intention to export power.

3) Size Category

- a) Facilities ≤ 10 kW (residential) and ≤ 100 kW (commercial)
Facilities ≤ 10 kW (residential) and ≤ 100 kW (commercial) of connected generation will be placed in this size category unless the Member requests connection under category b).
- b) Facilities > 10 kW (residential) and > 100 kW (commercial) and < 10 MW
Facilities > 10 kW (residential) and > 100 kW (commercial) and < 10 MW of connected generation will be placed in this size category. Smaller capacity facilities may be placed in this size category if so requested by the Member.
- c) Facilities above 10 MW of connected generation
Not considered under this DG Manual

II. MEMBER'S INITIAL REQUIREMENTS

1) Notification

- a) The Member must meet all the Cooperative's membership and service requirements in addition to the requirements in the DG Manual.
- b) Anyone owning or operating a DG facility in parallel with the Cooperative's system must notify the Cooperative of the existence, location and category of the DG facility.

2) Service Request

- a) In advance of request for an interconnection, the Member must contact the Cooperative and complete the "Cooperative Agreement for Interconnection and Parallel Operation of Distributed Generation."
- b) DG facilities < 5 kW in size and of standard manufacture and design (as so determined by the Cooperative) may submit the Agreement Short Form. All other facilities must submit the Agreement Long Form.
- c) A separate form must be submitted for each facility.

3) Submit a DG Plan

- a) As a part of the application, the Member shall submit a plan detailing the electrical design, interconnection requirements, size, and operational plans for the DG facility (the "DG plan"). Either at the time of submission or at any time during the review process, the Cooperative may require additional information or may require the DG plan to be prepared by a Professional Engineer registered in the state of Georgia.
- b) In the case of DG facilities (i) to be operated in parallel with the Cooperative's system, (ii) with no intention to export power to the Cooperative and (iii) that are of standard design and intended entirely as emergency or back-up power supply for the facility, the Cooperative may, at its sole discretion, waive the application fee.
- c) Prior to review of the application and DG plan by the Cooperative, the Member shall pay an application fee as indicated below. A separate fee must be submitted for each DG facility.

DG Size (Connected Load)	Application Fee	Additional Engineering Fee
≤ 10 KW (residential) ≤ 100 kW (commercial)	\$50	None
> 10 KW to <10 MW (residential) > 100 kW to < 10 MW (commercial)	\$250	As Required (Paid by Member)
> 10 MW	Not covered by this DG Manual	

III. COOPERATIVE AND/OR POWER AND/OR TRANSMISSION SUPPLIER REVIEW PROCESS

1) Plan Review Process

a) The Cooperative and its Power and/or Transmission Supplier, if requested by the Cooperative, will review the application and accompanying documents, plans, specifications, and other information provided and will return an interconnection analysis to the Member within 60 days of receipt of final plans and specifications and additional information, if any, requested by the Cooperative.

b) Technical review will be consistent with guidelines established by the most recent *IEEE Standard 1547 Guide for Distributed Generation Interconnection*. The Member will be required by the Cooperative to provide certification by a Professional Engineer that their DG Facilities have been tested and certified per applicable IEEE guidelines.

c) If corrections or changes to the plans, specifications and other information are to be made by the Member, the 60 day period may be reinitialized when such changes or corrections are provided to the Cooperative. In addition, any changes to the site or project requiring new analysis by the Cooperative may require additional cost and a new DG plan. The cost will be determined by the Cooperative and shall be paid by the Member.

d) The Member acknowledges and agrees that any review or acceptance of such plans, specifications and other information by the Cooperative and/or its Power and/or Transmission Supplier shall not impose any liability on the Cooperative and/or its Power and/or Transmission Supplier and does not guarantee the adequacy of the Member's equipment or DG facility to perform its intended function. The Cooperative and its Power and/or Transmission Supplier disclaim any expertise or special knowledge relating to the design or performance of DG installations and does not warrant the efficiency, cost-effectiveness, safety, durability, or reliability of such DG installations. Installation and operation of the DG facility shall at all times be at the Member's risk and expense.

e) In the event it is necessary at the time of initial interconnection or at some future time for the Cooperative and/or its Power and/or Transmission Supplier to modify electric delivery systems in order to serve the Member's DG facilities and/or purchase or continue to purchase the output of the Member's DG facilities, or because the quality of the power provided by the Member's DG adversely affects the Cooperative's and/or its Power and/or Transmission Supplier's delivery system, the Member will be responsible to pay the Cooperative and/or its Power and/or Transmission Supplier in advance for all costs of modifications required for the interconnection of the Member's DG facilities.

IV. SALES TO AND PURCHASES FROM A DG FACILITY

- 1) For all DG where the Member desires to export power
 - a) All DG facilities shall be billed under one of the Cooperative's existing rate tariffs.
 - b) All sales of electric power and energy by the Cooperative to a Member shall be calculated under the applicable retail rate schedule established by the Cooperative as if there were no DG installation at the Member's premises, including any charges in the Cooperative's DG tariff rider.
 - c) The Member shall pay all rates and charges so listed in the applicable tariff sections.
 - d) The Member shall be subject to any applicable charges for ancillary services related to the Member's DG facility, including but not limited to scheduling, dispatching and energy imbalance.

- 2) For DG ≤ 10 kW (residential) and ≤ 100 kW (commercial) where the Member desires to export power
 - a) For power produced less than on-site requirements, the Member will be compensated by netting the Member's kWh generation against the Member's kWh consumption, referred to as "net metering," as described in *The Georgia Cogeneration and Distributed Generation Act of 2001*. The Cooperative shall bill the Member for the excess energy supplied by the Cooperative over and above the energy supplied by the Member during each billing period according to the Cooperative's applicable retail rate schedule.
 - b) When the energy supplied by the Member and is generated from a solar photovoltaic system, a fuel cell, or a wind turbine exceeds the energy supplied by the Cooperative during any period, the excess energy shall be purchased or credited by the Cooperative at its avoided cost. Avoided cost will be calculated by dividing the prior year's total power purchase cost (excluding demand costs and transmission costs) by the prior year's total kWh's purchased. The payment of avoided cost will only be available on a first-come, first-served basis until the cumulative generating capacity of all renewable energy sources equals 0.2 per cent of the Cooperative's peak demand for the previous calendar year. After this limit is reached the excess energy will be purchased at the Cooperative's avoided Oglethorpe Power cost. Avoided Oglethorpe Power cost will be calculated by dividing the prior year's total Oglethorpe Power cost (excluding demand costs and transmission costs) by the prior year's total kWh's provided by Oglethorpe Power. Energy generated by any other method than those listed previously will also be purchased at the avoided Oglethorpe Power cost.
 - c) The Member shall sign an approved Interconnection Agreement, as detailed in this DG Manual, for interconnection service with the Cooperative.
 - d) In addition to all other charges, the Cooperative may bill the Member for any additional facilities and/or metering charges as determined by the Cooperative and appended to the Interconnection Agreement.

- 3) For DG > 10 kW (residential) and > 100 kW (commercial) where the Member desires to export power

- a) The type of metering to be used shall be specified at the sole discretion of the Cooperative. The metering shall provide data so the Cooperative can determine each billing period the energy supplied to the Member by the Cooperative and the energy supplied to the Cooperative by the Member.
- b) At the sole discretion of the Cooperative, an approved load profile meter may be required which can be remotely read by the Cooperative through an approved communications link. Otherwise, the meter shall be read monthly by Cooperative personnel and the Member shall be billed for the additional cost of reading the meter.
- c) The Cooperative shall bill the Member for the full energy used by the Member during each billing period according to the Cooperative's applicable retail rate schedule.
- d) In addition to all other charges, the Cooperative may add an additional monthly charge for Members with DG facilities to recover any additional billing, meter reading and/or additional service costs.
- e) The Cooperative shall pay the Member on a monthly basis for the energy supplied by the Member to the Cooperative. The rate paid by the Cooperative to the Member shall be the Cooperative's current avoided Oglethorpe Power cost. Avoided Oglethorpe Power cost will be calculated by dividing the prior year's total Oglethorpe Power cost (excluding demand costs and transmission costs) by the prior year's total KWh's provided by Oglethorpe Power.
- f) The Member shall sign an approved Interconnection Agreement for Interconnection of Distributed Generation with the Cooperative.
- g) In addition to all other charges, the Cooperative may bill the Member for any additional facilities charges as determined by the Cooperative and appended to the Interconnection Agreement.

4) Purchases from the Member

- a) The Cooperative shall not be required to make any purchases that will cause the Cooperative to no longer be in compliance with any applicable contracts or all-power contract requirements with its power supplier(s).

V. MEMBER'S RESPONSIBILITY PRIOR TO OPERATION

1) Line Extension and Modifications to Cooperative Facilities

- a) As a part of the interconnection analysis performed by the Cooperative, the Member will be provided with an estimate of any line extension or other cost to be incurred in providing electric delivery service to the Member's DG facility.
- b) Notwithstanding the Cooperative's line extension policy, the Member shall pay in advance the full cost of the construction of any transmission, substation, distribution, transformation, metering, protective, or other facilities or equipment which, at the sole discretion of the Cooperative and/or its Power and/or Transmission supplier, is required to serve the Member's DG facility.
- c) In the event it is necessary at the time of initial interconnection or at some future time for the Cooperative and/or its Power and/or Transmission Supplier to modify electric delivery systems in order to serve the Member's DG facilities and/or

- purchase or continue to purchase the Member's output, or because the quality of the power provided by the Member's DG adversely affects the Cooperative and/or its Power and/or Transmission Supplier's delivery system, the Member will reimburse the Cooperative and/or its Power and/or Transmission Supplier for all costs of modifications required for the interconnection of the Member's DG facilities.
- d) In the event the Cooperative at any time in the future changes primary voltage of facilities serving the DG facility such that metering equipment, transformers and/or any other Member-owned equipment must be changed to continue receiving service at the new primary voltage level, the full cost of the change will be borne by the Member.
 - e) In all cases, the Member shall pay the full cost of the installation of a visible load break disconnect switch by and to the sole specification of the Cooperative. The switch shall be readily accessible to Cooperative personnel and of a type that can be secured in an open position by a Cooperative lock.

2) Applicable Regulations

The DG facility shall be installed and operated by the Member subject to and in accordance with the terms and conditions set forth in the Cooperative's rules, regulations, bylaws, rates and tariffs, as amended from time to time, and, if applicable, approved by the Cooperative's board of directors, which are incorporated herein by reference, and in compliance with all applicable federal, state and local laws, regulations, zoning codes, building codes, safety rules, environmental restrictions, ordinances and regulations, including without limitation, the most recent IEEE Standard 1547 Guide for Distributed Generation Interconnection, applicable ANSI standards, including ANSI C84.1 Range A, and in accordance with industry standard prudent engineering practices.

3) Liability Insurance

- a) Facilities ≤10 kW (residential) and ≤100 kW (commercial)
 - (1) Facilities ≤10 kW (residential) and ≤100 kW (commercial) will be required to provide insurance as required by current Georgia Law.

- b) Facilities >10 kW (residential) and >100 kW (commercial)
 - (1) Prior to interconnection, the Member must provide (at Member's expense) a certificate of insurance showing satisfactory liability insurance including contractual liability insurance covering indemnity agreements which insures the Member against all claims for property damage and for personal injury or death arising out of, resulting from or in any manner connected with the installation, operation and maintenance of the Member's generating equipment.
 - (2) The amount of such insurance coverage required to be provided by the Member shall be not less than \$1,000,000 per occurrence. The amount of such coverage and the type of insurance coverage required shall be acceptable to the Cooperative and may be amended from time to time by the Cooperative at the sole discretion of the Cooperative.
 - (3) The certificate shall provide that the insurance policy will not be changed

or canceled during its term without thirty days written notice to the Cooperative. The term of the insurance shall be coincident with the term of the interconnection contract or shall be specified to renew throughout the length of the interconnection contract.

- (4) The Member shall provide proof of such insurance to the Cooperative at least annually.

4) Contracts

a) Interconnection Contract

The Member will sign and deliver an Agreement for Interconnection to the Cooperative substantially in the form as shown in the COOPERATIVE AGREEMENT FOR INTERCONNECTION AND PARALLEL OPERATION OF DISTRIBUTED GENERATION included in this DG Manual.

5) Initial Interconnection

- a) Upon satisfactory completion of the review process and execution of required agreements as outlined in this DG Manual, the Cooperative will begin installation of the interconnection of DG facilities. The interconnection will be completed as soon as practical after completion of the review process and execution of the necessary agreements/contracts. After completion of interconnection requirements and prior to initiation of service, the Cooperative will conduct a final inspection of the facilities and interconnection to the Cooperative's system. Upon final inspection satisfactory to the Cooperative, the Cooperative will initiate service to the Member.
- b) The Cooperative's review process and final inspection is intended as a means to help safeguard the Cooperative's facilities and personnel. The Member acknowledges and agrees that any review or acceptance of such plans, specifications and other information by the Cooperative and/or its Power and/or Transmission Supplier shall not impose any liability on the Cooperative and/or its Power and/or Transmission Supplier and does not guarantee the adequacy of the Member's equipment or DG facility to perform its intended function. The Cooperative and its Power and/or Transmission Supplier disclaims any expertise or special knowledge relating to the design or performance of DG installations and does not warrant the efficiency, cost-effectiveness, safety, durability, or reliability of such DG installations.

VI. REFUSAL TO INTERCONNECT SERVICE OR DISCONNECTION OF INTERCONNECTION SERVICE

The Cooperative may, at its sole discretion, prevent the interconnection or disconnect the interconnection of DG facilities due to reasons such as safety concerns, reliability issues, power quality issues, breach of interconnection contract or any other issue which the Cooperative considers to be a reasonable basis for such action. Any disconnection may be without prior notice.

VII. OPERATION OF PARALLEL FACILITY

The purpose of this section is to outline the Cooperative's operational requirements (the fulfillment of which is the responsibility of the Member) for DG facilities operated in parallel with the Cooperative's system and is not intended to be a complete listing of all operational, regulatory, safety and other requirements.

1) Ownership of facilities

- a) The Member shall own and be solely responsible for all expense, installation, maintenance and operation of all facilities, including all power generating facilities, at and beyond the point of delivery as defined in the Cooperative's tariffs.
- b) At its sole discretion, the Cooperative may locate cooperative owned metering equipment and/or transformers past the point of delivery.

2) Self-Protection of DG Facilities

- a) The Member will furnish, install, operate and maintain in good order and repair all equipment necessary for the safe operation of DG facilities operated in parallel with the Cooperative system.
- b) The Member's equipment will have capability to both establish and maintain synchronism with the Cooperative system and to automatically disconnect and isolate the DG facility from the Cooperative system upon loss of Cooperative power.
- c) The Member's DG facility will be designed, installed and maintained to be self-protected from normal and abnormal conditions on the Cooperative system including, but not limited to, overvoltage, undervoltage, overcurrent, frequency deviation, and faults. Self-protection will be compatible with all applicable Cooperative protection arrangements and operating policies.
- d) Additional protective devices and/or functions may be required by the Cooperative when, in the sole judgment of the Cooperative, the particular DG facility installation and/or the Cooperative system characteristics so warrant.

3) Quality of service

- a) The Member's DG facility will generate power at the nominal voltage of the Cooperative's system at the Member's delivery point as defined by ANSI Standard C84.1 Voltage Range A.
- b) Member's DG installation will generate power at a frequency within the tolerances as defined by IEEE 1547.
- c) Member's DG facility shall produce power at a minimum power factor of at least 95% or shall use power factor correction capacitors to ensure at least a 95% power factor.
- d) Member's DG facility shall be in accordance with the power quality limits specified in IEEE 519.
- e) The overall quality of the power provided by the Member's DG facility including, but not limited to, the effects of harmonic distortion, voltage regulation, voltage flicker, switching surges and power factor, will be such that the Cooperative

system is not adversely affected in any manner.

- f) In the event that adverse effects are caused in whole or in part by the Member's DG facility, the Member will correct the cause of such effects within 30 days of the initial adverse effect and, if applicable, reimburse the Cooperative for required correction. However, the disconnection of the facilities by the Cooperative is permitted if, in the sole judgment of the Cooperative, adverse effects may warrant immediate disconnection from the Cooperative's system per Section VII.4.

4) Safety disconnect

- a) The Member shall install a visible load break disconnect switch at the Member's expense and to the Cooperative's specifications.
- b) The switch will be located so as to be readily accessible to Cooperative personnel in a location acceptable to both the Member and Cooperative.
- c) The switch shall be a type that can be secured in an open position by a lock owned by the Cooperative. If the Cooperative has locked the disconnect switch open, the Member shall not operate or close the disconnect switch.
- d) The Cooperative shall have the right to lock the switch open when, in the sole judgment of the Cooperative:
 - (1) It is necessary to maintain safe electrical operating and/or maintenance conditions,
 - (2) The Member's DG adversely affects the Cooperative system, or
 - (3) There is a system emergency or other abnormal operating condition warranting disconnection.
- e) The Cooperative reserves the right to operate the disconnect switch for the protection of the Cooperative system even if it affects the Member's DG facility. In the event the Cooperative opens and/or closes the disconnect switch:
 - (1) The Cooperative shall not be responsible for energization or restoration of parallel operation of the DG facility.
 - (2) The Cooperative will make reasonable efforts to notify the Member.
- f) The Member will not bypass the disconnect switch at any time for any reason.
- g) Signage shall be placed by the Cooperative at the Member's expense and located at the disconnect indicating the purpose of the switch along with contact names and numbers of both the Member and the Cooperative.
- h) Members with DG facilities as defined in this DG Manual which are solely for the purpose of emergency backup without intent to export power shall not operate their DG facilities at any time unless visibly disconnected from the Cooperative system. The Member shall install at his/her own expense an interlocking switch for the purpose of insuring the Member's facilities do not operate in parallel with the Cooperative's facilities.
- i) Should the Cooperative lose power serving the Member's DG facilities for any reason, Members with DG facilities shall not operate their DG facilities unless visibly disconnected from the Cooperative system.

5) Access

- a) Persons authorized by the Cooperative will have the right to enter the Member's property for purposes of testing, operating the disconnect switch, reading or testing the metering equipment, maintaining right-of-way or other DG facility equipment and/or Cooperative service requirement. Such entry onto the Member's property may be without notice.
- b) If the Member erects or maintains locked gates or other barriers, the Member will furnish the Cooperative with convenient means to circumvent the barrier for immediate full access for the above-mentioned reasons.

6) Liability for Injury and Damages

- a) The Member assumes full responsibility for electric energy furnished by the Member and shall indemnify the Cooperative and/or its Power and/or Transmission Supplier against and hold the Cooperative and/or its Power and/or Transmission Supplier harmless from all claims for both injuries to persons, including death, and damages to property resulting therefrom.
- b) The Cooperative and/or its Power and/or Transmission Supplier shall not be liable for either direct or consequential damages resulting from failures, interruptions, or voltage and waveform fluctuations occasioned by causes reasonably beyond the control of the Cooperative and/or its Power and/or Transmission Supplier including, but not limited to, acts of God or public enemy, acts of terrorism, sabotage and/or vandalism, accidents, fire, explosion, labor troubles, strikes, order of any court or judge granted in any bona fide adverse legal proceeding or action, or any order of any commission, tribunal or governmental authority having jurisdiction. ALL PROVISIONS NOTWITHSTANDING, IN NO EVENT SHALL THE COOPERATIVE BE LIABLE TO THE MEMBER FOR ANY INTEREST, LOSS OF ANTICIPATED REVENUE, EARNINGS, PROFITS, OR INCREASED EXPENSE OF OPERATIONS, LOSS BY REASON OF SHUTDOWN OR NON-OPERATION OF MEMBER'S PREMISES OR FACILITIES, OR FOR ANY INDIRECT, INCIDENTAL, OR CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF OR RELATED, IN WHOLE OR PART, TO THIS AGREEMENT. THE COOPERATIVE SHALL NOT BE LIABLE IN ANY EVENT FOR CONSEQUENTIAL DAMAGES.
- c) The Member is solely responsible for insuring that the Member's facility complies with all applicable regulations including, but not limited to, laws, regulations, ordinances, Cooperative and Cooperative Power and/or Transmission Supplier tariffs, policies and directives.

7) Metering/Monitoring

- a) The Cooperative shall specify, install and own all metering equipment.
- b) Facilities ≤ 10 kW (residential) and ≤ 100 kW (commercial)
The facility will be metered by one of the following methods, at the sole discretion of the Cooperative.
 - (1) Installing two meters, each measuring the flow of energy in a single direction, one located to measure the flow of energy provided by the Cooperative less any energy used provided by the DG and one located to register the flow of energy provided by the DG to the Cooperative in

excess of energy provided by the DG and used on site.

- (2) Installing an electronic meter with two registers capable of registering energy flow as described in 7)b)1).

c) Facilities >10 kW (residential) and >100 kW (commercial)

- (1) Power transfer at the point of interconnection will be measured by metering equipment as installed and specified at the sole discretion of the Cooperative.
 - (2) There shall be no net metering.
- d) The meter shall be read at a time or times of month determined at the Cooperative's sole discretion for acquiring metering data. The Member shall provide the Cooperative an approved communications link at the Member's cost for this purpose if so requested by the Cooperative. The type of communications link and metering equipment measuring purchase of power by the Cooperative shall be installed and specified at the sole discretion of the Cooperative.
 - e) The Cooperative may, at its sole discretion, require the Member to pay the Cooperative in advance for metering and monitoring equipment and installation expense.
 - f) Meter testing shall follow the Cooperative's standard policy on metering, testing and accuracy.
 - g) At its sole discretion, the Cooperative may meter the facility at primary or secondary level.

8) Notice of Change in Installation

- a) The Member will notify the Cooperative in writing thirty (30) days in advance of making any change affecting the characteristics, performance, or protection of the DG facility.
- b) If any modification undertaken by the Member will create or has created conditions which may be unsafe or adversely affect the Cooperative system, the Member shall immediately correct such conditions or be subject to immediate disconnection from the Cooperative system.
- c) Any change in the operating characteristics of the DG facility including, but not limited to, size of generator, total facility capacity, nature of facility, fuel source, site change, hours of operation, or type used, may, at the sole discretion of the Cooperative, require a new application process, including, but not limited to, application form, application fee, DG plan and DG plan review by the Cooperative.

9) Testing and Record Keeping

- a) The Member will test all aspects of the protection systems up to and including tripping of the generator and interconnection point at start-up and thereafter as required. Testing will verify all protective set points and relay/breaker trip timing and shall include procedures to functionally test all protective elements of the system. The Cooperative may witness the testing.
- b) The Member will maintain records of all maintenance activities, which the Cooperative may review at reasonable times.
- c) For systems greater than 500 kW, a log of generator operations shall be kept. At a

minimum, the log shall include the date, generator time on, generator time off, and megawatt and megavar output. The Cooperative may review such logs at reasonable times.

10) Disconnection of Service

The Cooperative may, at its sole discretion, discontinue the interconnection of DG installations due to reasons such as safety concerns, reliability issues, power quality issues, breach of interconnection contract or any other issue, which the Cooperative considers to be a reasonable basis for such action.

11) Compliance With Laws, Rules and Tariffs

The DG installation owned and installed by the Member shall be installed and operated by Member subject to and in accordance with the terms and conditions set forth in the Cooperative's rules, regulations, bylaws, rates and tariffs, as amended from time to time, and, if applicable, approved by the Cooperative's board of directors, which are incorporated herein by reference, and in compliance with all applicable federal, state and local laws, regulations, zoning codes, building codes, safety rules, environmental restrictions, ordinances and regulations, including without limitation and in accordance with industry standard prudent engineering practices.

**COOPERATIVE AGREEMENT FOR INTERCONNECTION AND PARALLEL
OPERATION OF DISTRIBUTED GENERATION (“Interconnection Agreement”)**

SHORT FORM CONTRACT

This Interconnection Agreement (“Agreement”) is made and entered into this ____ day of _____, 20____, (“Effective Date”) by SOUTHERN RIVERS ENERGY, INC., AN ELECTRIC MEMBERSHIP CORPORATION, (“Cooperative”), a corporation organized under the laws of Georgia, and _____ (“DG Owner/Operator”), 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:

The provisions of the Cooperative’s Distributed Generation Procedures and Guidelines Manual for Members (“DG Manual”) shall be considered to be a part of this contract.

This agreement provides for the safe and orderly operation of the DG Owner/Operator’s electrical facilities and the interconnection of the DG Owner/Operator’s facility(ies) (collectively “Facility”)at:

_____ and the electrical distribution system (“System”) owned by the Cooperative.

This Agreement does not supersede any requirements of any applicable tariffs in place between the DG Owner/Operator and the Cooperative.

1. **Intent of Parties:** It is the intent of the DG Owner/Operator to interconnect an electric power generator to the Cooperative’s electrical distribution system.

It is the intent of the Cooperative to operate the distribution system to maintain a high level of service to its customers and to maintain a high level of power quality.

It is the intent of both parties to operate in a way that helps ensure the safety of the public and respective employees.

2. **Establishment of Point of Interconnection** - The point where the electric energy first leaves the wires or facilities of the system owned by the Cooperative and enters the wires or facilities of the Facility provided by DG Owner/Operator is the "Point of Interconnection." Cooperative and DG Owner/Operator agree to interconnect the Facilities at the Point of Interconnection in accordance with the Cooperative's Rules and Regulations and DG Manual relating to interconnection of Distributed Generation (the "Rules") and as described in the attached Exhibit A.

3. **Operating Authority:** The DG Owner/Operator is responsible for establishing operating procedures and standards within their organization. The operating

authority for the DG Owner/Operator and its operating authority shall ensure that the Operator in Charge of the generator constituting a part of the Facility 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 operating authority for the DG Owner/Operator is:

Name or title of operating authority _____

Address _____

Phone number _____

4. **Operator in Charge:** The Operator in Charge is the person identified by name or job title responsible for the real time operation of the Facility owned or leased by the DG Owner/Operator.

The Operator in Charge for the DG Owner/Operator is:

Name or title of operating authority _____

Address _____

Phone number _____

5. **Limitation of Liability and Indemnification:**

- a. Notwithstanding any other provision in this Agreement, with respect to the Cooperative's provision of electric service to DG Owner/Operator and the services provided by the Cooperative pursuant to this Agreement, Cooperative's liability to DG Owner/Operator shall be limited as set forth in the Cooperative's tariffs and terms and conditions for electric service, which are incorporated herein by reference.
- b. Neither Cooperative nor DG Owner/Operator shall be liable to the other for damages resulting from a Force Majeure event as hereinafter defined.
- c. Notwithstanding Paragraph 5.b of this Agreement, the DG Owner/Operator shall assume all liability for, and shall indemnify and hold harmless Cooperative for, any claims, losses, damages, liabilities, costs, and expenses of any kind or character to the extent that they result from DG Owner/Operator's negligence or other wrongful conduct (including the negligence or wrongful conduct of DG Owner/Operator's operators and their agents, employees, or contractors) in connection with the design, construction or operation of the Facilities. Such indemnity shall include, but is not limited to, financial responsibility for (a) monetary losses; (b) reasonable costs and expenses of defending an action or claim; (c) damages related to death or injury; (d) damages to property; and (e) damages for the disruption of business.

- d. Cooperative and DG Owner/Operator shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. The Cooperative, while retaining the right to inspect, does not assume any duty of inspecting the DG Owner/Operator's lines, wires, switches, or other equipment or property and will not be responsible therefore. DG Owner/Operator assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith.
 - e. For the mutual protection of the DG Owner/Operator and the Cooperative, only with the Cooperative's prior written authorization are the connections between the Cooperative's service wires and the DG Owner/Operator's service entrance conductors to be energized.
 - f. The provisions of this Section 5 shall survive any termination of this Agreement.
6. **Metering:** Metering shall be accomplished as described in the Cooperative's DG Manual.
7. **Responsibilities of Cooperative and DG Owner/Operator for Installation, Operation and Maintenance of Facilities** - DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for, its Facilities, unless otherwise specified on Exhibit A. DG Owner/Operator shall conduct operations of its Facilities in compliance with all aspects of the Rules, and Cooperative shall conduct operations of its electric distribution facilities in compliance with all aspects of the Rules, or as further described and mutually agreed to in the attached Exhibit A. Maintenance of Facilities shall be performed in accordance with the applicable manufacturers' recommended maintenance schedule. The DG Owner/Operator agrees to ensure its Facilities are constructed, operated and maintained in accordance with specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code and all other applicable codes and regulations and future modifications thereof.
8. **Design Reviews and Inspections** - The DG Owner/Operator shall provide to the Cooperative the following documentation and inspection results:
- a. One-Line Diagram. The diagram shall include at a minimum, all major electrical equipment that is pertinent to understanding the normal and contingency operations of the DG Facilities.
 - b. Testing Records. Testing of Facilities shall include manufacturer recommended testing including Cooperative verified operation of all interconnection relays and connect/disconnect devices at the start of commercial operation and periodic manufacturer recommended testing thereafter at least on an annual basis, also to be verified with the Cooperative if deemed necessary by the Cooperative. Records documenting testing and results shall be kept for two years following the testing and shall be provided to the Cooperative upon request
9. **Insurance:** Shall be required as described in the Cooperative's DG Manual.

10. **Suspension of Interconnection:** It is intended that the interconnection should not compromise the Cooperative's protection or operational requirements. The operation of the DG Owner/Operator's Facility and the quality of electric energy supplied by the DG Owner/Operator shall meet the standards as specified by the Cooperative. If the operation of the DG Owner/Operator's Facility or quality of electric energy supplied (in the case of power export) does not meet the standards as specified, then the DG Owner/Operator shall take reasonable and expedient corrective action, including any such corrective action as requested by the Cooperative. The Cooperative shall have the right to disconnect the DG Owner/Operator's Facility, until compliance is reasonably demonstrated. Notwithstanding, the Cooperative may in its sole discretion disconnect the DG Owner/Operator's Facility from the distribution system without notice if the operating of the Generating Plant may be or may become dangerous to life and property.
11. **Compliance with Laws, Rules and Tariffs:** Both the Cooperative and the DG Owner/Operator shall be responsible for complying with all applicable laws, rules and regulations, including but not limited to the laws of the state of Georgia, and the Cooperative's DG Manual, Tariffs, Rules and Regulations, By-Laws and other governing documents. The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the tariff schedules and rules of the Cooperative as applicable to the electric service provided by the Cooperative, which tariffs and rules are hereby incorporated into this Agreement by this reference. The Cooperative shall have the right to publish changes in rates, classification, service or rule, with the proper notification to all DG owners/operators and Cooperative members.
12. **Maintenance Outages:** Maintenance outages will occasionally be required on the Cooperative's system, and the Cooperative will provide reasonable notice and planning as practicable to minimize downtime. It is noted that in some emergency cases such notice may not be reasonably possible. Compensation will not be made for unavailability of Cooperative's system due to outages.
13. **Access:** Access is granted as may be required by the Cooperative to the DG Owner/Operator's Facility for maintenance, operating and meter reading. The Cooperative reserves the right, but not the obligation, to inspect the DG Owner/Operator's Facility.
14. **Force Majeure:** For the purposes of this Agreement, a Force Majeure event is any event:
 - (a) that is beyond the reasonable control of the affected party; and
 - (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent that they satisfy the preceding requirements: acts of war, acts of terrorism, public disorder, rebellion or insurrection; floods, hurricanes, earthquakes, lightning, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage. If a Force Majeure event prevents a Party from fulfilling any obligations under this agreement, such Party will promptly notify the other Party in writing and will keep

the other Party informed on a continuing basis as to the scope and duration of the Force Majeure event. The affected Party will specify the circumstances of the Force Majeure event, its expected duration and the steps that the affected Party is taking to mitigate the effect of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement if a Force Majeure event prevents a Party from fulfilling such performance of obligations but will use reasonable efforts to resume its performance as soon as possible.

15. **Assignment** - At any time during the term of this Agreement, the DG Owner/Operator may assign this Agreement to a corporation, an entity with limited liability or an individual (the "Assignee"), provided that the DG Owner/Operator obtains the prior written consent of the Cooperative in advance of the assignment. The Cooperative's consent will be at the Cooperative's discretion based on whether or not the Cooperative determines that the Assignee is financially and technically capable to assume ownership and/or operation of the DG unit. The company or individual to which this Agreement is assigned in accordance with the terms and conditions of this Agreement will be responsible for the proper operation and maintenance of the DG Facilities, and will be a party to all provisions of this Agreement.
16. **Term:** The term of this Agreement is a period of two (2) years from the Effective Date ("Initial Term"). This Agreement shall automatically renew in (1) year increments after the Initial Term unless terminated sooner. This Agreement may be canceled by either party with 30 days prior written notice to the other party during the Initial Term or any renewal period.

AGREED TO BY

DG Owner/Operator

Southern Rivers Energy, Inc.,
an Electric Membership Corporation

Name

Name

Title

Title

Date Signed

Date Signed

**COOPERATIVE AGREEMENT FOR INTERCONNECTION AND PARALLEL
OPERATION OF DISTRIBUTED GENERATION ("Interconnection Agreement")**

LONG FORM CONTRACT

This Interconnection Agreement ("Agreement") is made and entered into this ____ day of _____, 20____, ("Effective Date") by SOUTHERN RIVERS ENERGY, INC., AN ELECTRIC MEMBERSHIP CORPORATION, ("Cooperative"), a corporation organized under the laws of Georgia, and _____ ("DG Owner/Operator"), 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 applicable to conditions under which the Cooperative and the DG Owner/Operator agree that one or more generating facilities (described in Exhibit A) owned by the DG Owner/Operator of _____ kW or less, to be interconnected at _____ kV or less ("Facilities") may be interconnected to the Cooperative's electric power distribution system ("System").

The provisions of the Cooperative's Distributed Generation Procedures and Guidelines Manual for Members ("DG Manual") shall be considered to be a part of this contract.

2. **Establishment of Point of Interconnection** - The point where the electric energy first leaves the wires or facilities of the system owned by the Cooperative and enters the wires of the Facility owned or leased by the DG Owner/Operator is the "Point of Interconnection." Cooperative and DG Owner/Operator agree to interconnect the Facilities at the Point of Interconnection in accordance with the Cooperative's Rules and Regulations and DG Manual relating to interconnection of Distributed Generation (the "Rules") and as described in the attached Exhibit A.
3. **Responsibilities of Cooperative and DG Owner/Operator for Installation, Operation and Maintenance of Facilities** - DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for, its Facilities, unless otherwise specified on Exhibit A. DG Owner/Operator shall conduct operations of its Facilities in compliance with all aspects of the Rules, and Cooperative shall conduct operations of its electric distribution facilities in compliance with all aspects of the Rules, or as further described and mutually agreed to in the attached Exhibit A. Maintenance of Facilities shall be performed in accordance with the applicable manufacturers' recommended maintenance schedule. The DG Owner/Operator agrees to ensure its Facilities are constructed, operated and maintained in accordance with specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code and all other applicable codes and regulations and future modifications thereof.

The DG Owner/Operator covenants and agrees to design, install, maintain, and operate its Facilities so as to reasonably minimize the likelihood of a malfunction or other disturbance, damaging or otherwise affecting or impairing the System. DG

Owner/Operator shall comply with all applicable laws, regulations, zoning codes, building codes, safety rules and environmental restrictions now or hereafter applicable to the design, installation and operation of its Facilities.

Cooperative will notify DG Owner/Operator if the Cooperative has reason to believe that the Facilities' operation causes disruption or deterioration of service to other customer(s) served from the System or if the Facilities' operation causes damage to the System. DG Owner/Operator will notify the Cooperative of any emergency or hazardous condition or occurrence with respect to the DG Owner/Operator's Facilities, which could affect safe operation of the System.

4. **Operator in Charge** - The DG Owner/Operator shall identify an individual (by name or title) who will perform as "Operator in Charge" of the Facilities. This individual must be familiar with this Agreement as well as provisions of other agreements and any regulations that may apply.

5. **Limitation of Liability and Indemnification**

- a. Notwithstanding any other provision in this Agreement, with respect to the Cooperative's provision of electric service to DG Owner/Operator and the services provided by the Cooperative pursuant to this Agreement, Cooperative's liability to DG Owner/Operator shall be limited as set forth in the Cooperative's tariffs and terms and conditions for electric service, which are incorporated herein by reference.
- b. Neither Cooperative nor DG Owner/Operator shall be liable to the other for damages resulting from a Force Majeure event as hereinafter defined.
- c. Notwithstanding Paragraph 5.b of this Agreement, the DG Owner/Operator shall assume all liability for, and shall indemnify and hold harmless Cooperative for, any claims, losses, damages, liabilities, costs, and expenses of any kind or character to the extent that they result from DG Owner/Operator's negligence or other wrongful conduct (including the negligence or wrongful conduct of DG Owner/Operator's operators, agents, employees, or contractors) in connection with the design, construction or operation of the Facilities. Such indemnity shall include, but is not limited to, financial responsibility for (a) monetary losses; (b) reasonable costs and expenses of defending an action or claim; (c) damages related to death or injury; (d) damages to property; and (e) damages for the disruption of business.
- d. Cooperative and DG Owner/Operator shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. The Cooperative, while retaining the right to inspect, does not assume any duty of inspecting the DG Owner/Operator's lines, wires, switches, or other equipment or property and will not be responsible therefore. DG Owner/Operator assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith.
- e. For the mutual protection of the DG Owner/Operator and the Cooperative, only

with the Cooperative's prior written authorization are the connections between the Cooperative's service wires and the DG Owner/Operator's service entrance conductors to be energized.

- f. The provisions of this Section 5 shall survive any termination of this Agreement.
6. **Design Reviews and Inspections** - The DG Owner/Operator shall provide to the Cooperative the following documentation and inspection results:
 - a. One-Line Diagram. The diagram shall include at a minimum, all major electrical equipment that is pertinent to understanding the normal and contingency operations of the DG Facilities, including generators, switches, circuit breakers, fuses, protective relays and instrument transformers.
 - b. Testing Records. Testing of Facilities shall include manufacturer recommended testing including Cooperative verified operation of all interconnection relays and connect/disconnect devices at the start of commercial operation and periodic manufacturer recommended testing thereafter at least on an annual basis, also to be verified with the Cooperative if deemed necessary by the Cooperative. Records documenting testing and results shall be kept for two years following the testing and shall be provided to the Cooperative upon request.
 7. **Right of Access, Equipment Installation, Removal & Inspection** - The Cooperative may send an employee, agent or contractor to the premises of the DG Owner/Operator at any time whether before, during or after the time the Facilities first produces energy to inspect the Facilities, and observe the Facility's installation, commissioning (including any testing), startup, and operation.

At all times Cooperative shall have access to DG Owner/Operator's premises for any purpose considered reasonable by the Cooperative in connection with the interconnection described in this Agreement, the Rules, or to provide service to its customers.
 8. **Confidentiality of Information** - Unless compelled to disclose by judicial or administrative process, or by other provisions of law or as otherwise provided for in this Agreement, the DG Owner/Operator and the Cooperative will hold in confidence any and all documents and information furnished by the other party in connection with this Agreement.
 9. **Prudent Operation and Maintenance Requirements** - The DG Owner/Operator agrees to construct, operate and maintain its Facilities in accordance with specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code and all other applicable codes and regulations and future modifications thereof.
 10. **Disconnection of Unit** - DG Owner/Operator retains the option to disconnect its Facilities from the System, provided that DG Owner/Operator notifies the Cooperative of its intent to disconnect by giving the Cooperative at least thirty (30) days' prior written notice. Such disconnection shall not be a termination of the agreement unless DG Owner/Operator exercises rights under Section 13.

DG Owner/Operator shall disconnect Facilities from the System upon the effective date of any termination under Section 13.

Subject to the Rules, for routine maintenance and repairs on the Cooperative's System that would, in the sole judgment of the Cooperative, affect the operation of the Facility, the Cooperative shall endeavor to provide DG Owner/Operator with seven (7) business days' notice of service interruption.

Cooperative shall have the right to suspend service in cases where continuance of service to DG Owner/Operator will, in the Cooperative's sole judgment, endanger persons or property. The Cooperative shall endeavor to provide the DG Owner/Operator with reasonable prior notice as practicable.

11. **Metering** - Metering shall be accomplished as described in the Cooperative's DG Manual.

12. **Insurance** – Insurance shall be required as described in the Cooperative's DG Manual.

13. **Effective Term and Termination Rights** - This Agreement becomes effective as of the Effective Date and shall continue in effect until terminated. This agreement may be terminated as follows: (a) DG Owner/Operator may terminate this Agreement at any time by giving the Cooperative sixty days prior written notice; (b) Cooperative may terminate upon failure by the DG Owner/Operator to generate energy from the Facilities in parallel within six (6) months after completion of the interconnection; (c) either Party may terminate by giving the other Party 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; (d) Cooperative may terminate by giving DG Owner/Operator 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 electric suppliers or any transmission utility, independent system operator or regional transmission organization having responsibility for the operation of any part of the System.

14. **Dispute Resolution** - If a dispute arises under this Agreement venue shall be exclusively in Lamar County, Georgia.

15. **Compliance with Laws, Rules and Tariffs** - Both the Cooperative and the DG Owner/Operator shall be responsible for complying with all applicable laws, rules and regulations, including but not limited to the laws of the state of Georgia, and the Cooperative's DG Manual, Tariffs, Rules and Regulations, By-Laws and other governing documents. The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the tariff schedules and rules of the Cooperative as applicable to the electric service provided by the Cooperative, which tariffs and rules are hereby incorporated into this Agreement by this reference, and in the event of a conflict between this Agreement and the applicable terms and conditions set forth in the tariff schedules and rules of the Cooperative, such tariff schedules and rules shall apply. The Cooperative shall have the right to publish changes in rates, classification, service or rule, with the

proper notification to all DG owners/operators and Cooperative members.

16. **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.
17. **Amendment** - This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced to writing and executed by the Parties.
18. **Entirety of Agreement and Prior Agreements Superseded** - This Agreement, including the Rules and all attached Exhibits and Facilities Schedules, 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 documents incorporated herein by reference, or in the DG Owner/Operator application, or other written information provided by the DG Owner/Operator 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.
19. **Force Majeure** -For the purposes of this Agreement, a Force Majeure event is any event:
 - (a) that is beyond the reasonable control of the affected Party; and
 - (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent that they satisfy the preceding requirements: acts of war, acts of terrorism, public disorder, rebellion or insurrection; floods, hurricanes, earthquakes, lightning, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage. If a Force Majeure event prevents a Party from fulfilling any obligations under this agreement, such Party will promptly notify the other Party in writing and will keep the other Party informed on a continuing basis as to the scope and duration of the Force Majeure event. The affected Party will specify the circumstances of the Force Majeure event, its expected duration and the steps that the affected Party is taking to mitigate the effect of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement if a Force Majeure event prevents a Party from fulfilling such performance of obligations but will use reasonable efforts to resume its performance as soon as possible.
20. **Assignment** - At any time during the term of this Agreement, the DG Owner/Operator may assign this Agreement to a corporation, an entity with limited liability or an individual (the "Assignee"), provided that the DG Owner/Operator obtains the prior written consent of the Cooperative in advance of the assignment.

The Cooperative's consent will be at the Cooperative's discretion based on whether or not the Cooperative determines that the Assignee is financially and technically capable to assume ownership and/or operation of the DG unit. The company or individual to which this Agreement is assigned in accordance with the terms and conditions of this Agreement will be responsible for the proper operation and maintenance of the DG Facilities, and will be a Party to all provisions of this Agreement.

21. **Permits, Fees and Approvals** - The Cooperative will have responsibility for the review, approval or rejection of the DG interconnection application. The approval process is intended to help ensure that the implementation of the applicant's DG project will not adversely affect the safe and reliable operation of the Cooperative's System, but any adverse affect shall be the sole responsibility of the DG Owner/Operator. The fees associated with the Application are listed in the most current fee schedule issued by the Cooperative. All fees are to be submitted in the form of a Bank Cashier's check along with the Application, unless other payment terms have been approved in advance by the Cooperative.
22. **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:

V.P. of Engineering and Operations
Southern Rivers Energy
P.O. Box 40
Barnesville, GA 30204

(b) If to DG Owner/Operator:

The above-listed names, titles, and addresses of either Party may be changed by written notification to the other, notwithstanding Section 17.

23. **Invoicing and Payment** - Invoicing and payment terms for services associated with this Agreement shall be consistent with applicable Rules of the Cooperative.
24. **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/or the Cooperative's Power and/or Transmission Supplier, and the obligations herein assumed are solely for the use and benefit of the Parties and/or the Cooperative's Power and/or Transmission Supplier. This Agreement may not be assigned by the DG Owner/Operator without the prior written consent of the

Cooperative as specified in Section 20. 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.

- 25. **Headings** - The descriptive headings of the various articles and sections of this Agreement have been inserted for convenience of reference only and are to be afforded no significance in the interpretation or construction of this Agreement.
- 26. **Multiple Counterparts** - This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

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

SOUTHERN RIVERS ENERGY, INC.,
AN ELECTRIC MEMBERSHIP CORPORATION

[DG OWNER/OPERATOR NAME]

BY: _____

BY: _____

NAME: _____

NAME: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

Attachments: Exhibit A, Description of Facilities, Facilities Schedule

**EXHIBIT A
DESCRIPTION OF FACILITIES**

DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for its Facilities, unless otherwise specified on Exhibit A.

FACILITIES SCHEDULE

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

1. Name:

2. Facilities location:

3. Delivery voltage:

4. Metering (voltage, location, losses adjustment due to metering location, and other:

5. Normal Operation of Interconnection:

6. One line diagram attached (check one): / _____ Yes / _____ No

7. Facilities to be furnished by Cooperative:

8. Facilities to be furnished by DG Owner/Operator:

9. Cost Responsibility:

10. Control area interchange point (check one): / _____ Yes / _____ No

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

12. Cooperative rules for DG interconnection attached (check one): / _____ Yes / _____ No

EXHIBIT B

**Southern Rivers Energy, Inc., an Electric Membership
Cooperative**

Application for Operation of Customer-Owned Generation

This application should be completed as soon as possible and returned to the Cooperative Representative in order to begin processing the request. See *Distributed Generation Procedures and Guidelines Manual for Members* for additional information.

INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Applicant interface. Every effort should be made to supply as much information as possible.

**PART 1
OWNER/APPLICANT INFORMATION**

Company:

Mailing Address:

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

Phone Number: _____ Representative: _____

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 (as applicable)

Photovoltaic _____ Wind _____ Microturbine _____
Diesel Engine _____ Gas Engine _____ Turbine Other _____

ESTIMATED LOAD INFORMATION

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

Total Site Load _____(kW) Total DG Output _____(kW)

Mode of Operation (check all that apply)

Isolated _____ Paralleling _____ Power Export _____

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including when you plan to operate the generator.

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-Amperes _____
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 (Xs): _____ % on _____ KVA base
Zero Sequence Reactance (Xo): _____ % on _____ KVA base
Neutral Grounding Resistor (if applicable): _____
 $I_2^2 t$ of K (heating time constant): _____
Additional Information: _____

INDUCTION GENERATOR DATA

Rotor Resistance (Rr): _____ ohms Stator Resistance (Rs): _____ ohms
Rotor Reactance (Xr): _____ ohms Stator Reactance (Xs): _____ ohms
Magnetizing Reactance (Xm): _____ ohms Short Circuit Reactance (Xd''): _____ ohms
Design letter: _____ Frame Size: _____
Exciting Current: _____ Temp Rise (deg C°): _____
Reactive PRequired: _____ 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. Rates: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft²
Energy Source (hydro, steam, wind, etc.) _____

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 grounded? _____

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

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

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

Neutral Grounding Resistor (if applicable): _____

INVERTER DATA (if applicable)

Manufacturer: _____ Model: _____

Rate 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.

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) _____

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.

ONE LINE DIAGRAM

SIGN OFF AREA

The applicant agrees to provide the Cooperative with any additional information requested by the Cooperative to assist in the review of this Application required to complete the interconnection. The applicant shall operate his equipment within the guidelines set forth by the Cooperative.

Applicant

Date

SOUTHERN RIVERS ENERGY CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

Cooperative contact: V.P. of Engineering and Operations
Address: P.O. Box 40
Barnesville, GA 30204
Phone: 877-358-1383
Fax: 770-358-6078

Web site: www.southernriversenergy.com