PROCEDURES FOR CONNECTING MEMBER-OWNED GENERATION TO THE ELECTRIC SYSTEM

OF

SOUTHERN PINE ELECTRIC COOPERATIVE, INC.

FOR

Residential and Small Commercial Loads

1,000 KW OR LESS

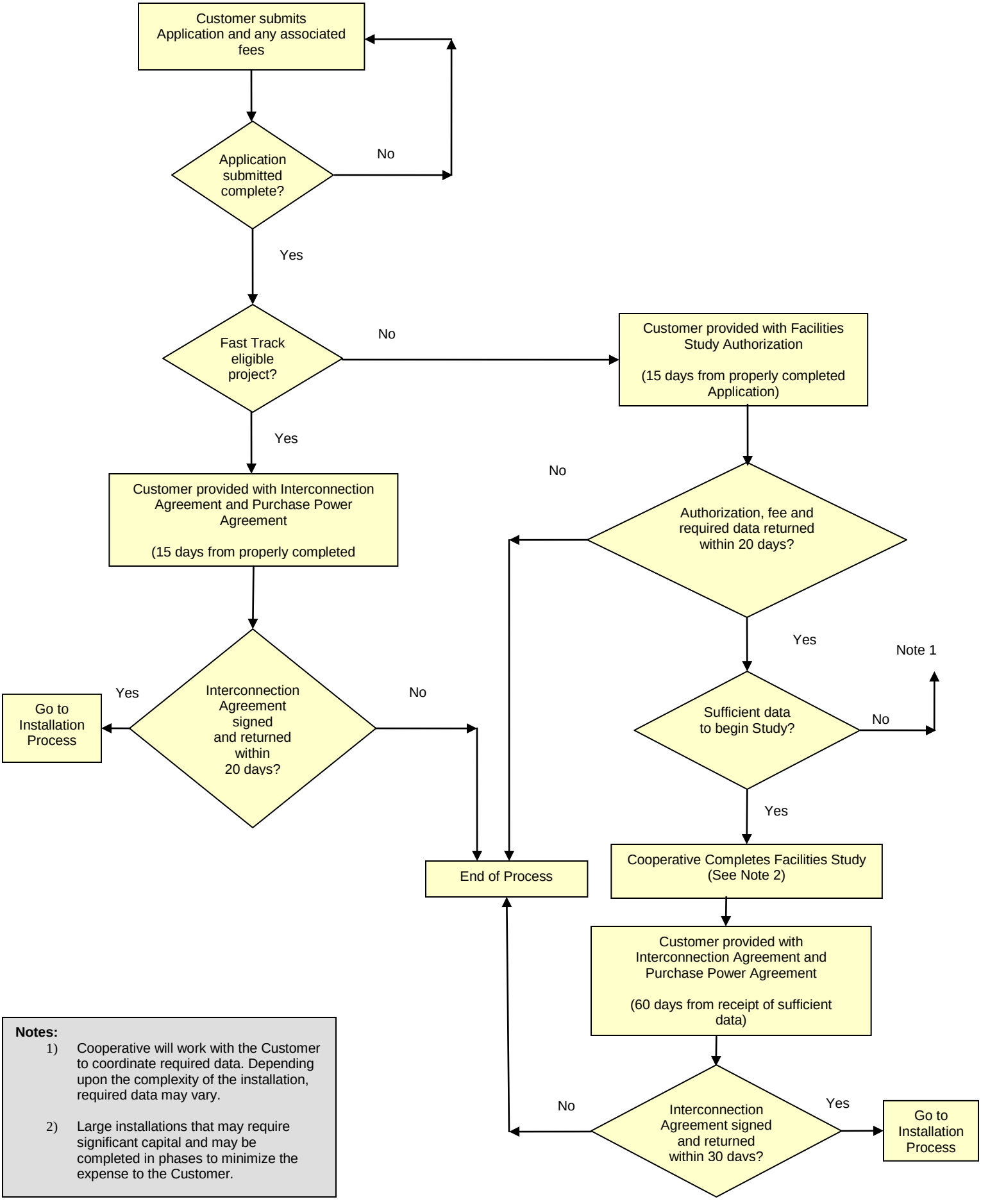
INTRODUCTION

Welcome to Southern Pine Electric Cooperative, Inc. We are here to serve your energy needs and to provide services related to those needs.

The information contained in the following document will guide you through the necessary steps in determining whether or not you will make application to install a member-owned electricity generator on the distribution system of the cooperative.

After reviewing the information, please contact any of those resources listed in the document should you have additional questions or need additional information.

Distributed Generation Application and Study Process

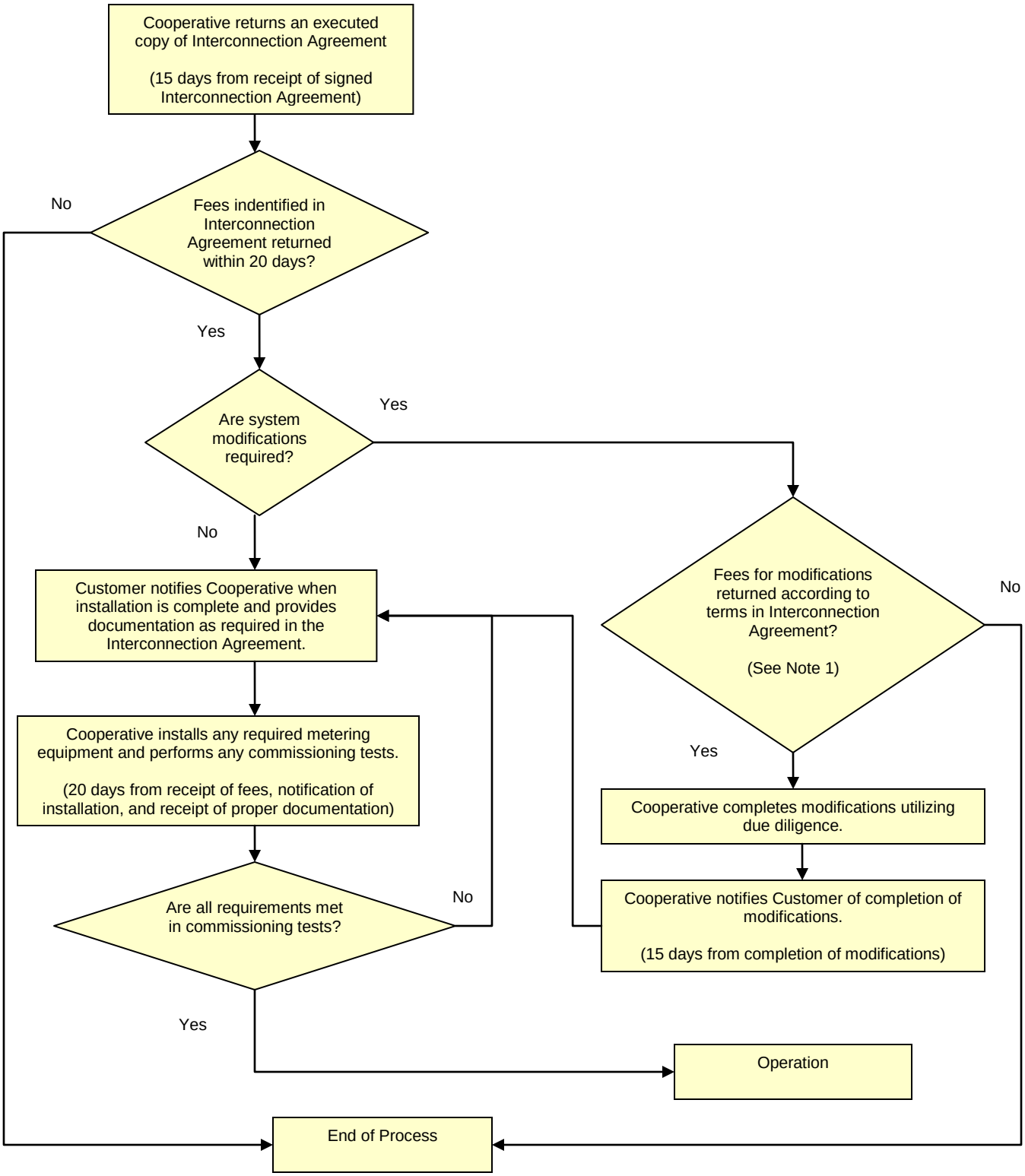


Notes:

1) Cooperative will work with the Customer to coordinate required data. Depending upon the complexity of the installation, required data may vary.

2) Large installations that may require significant capital and may be completed in phases to minimize the expense to the Customer.

Distributed Generation Installation Process



Notes:

1) For installations that require modifications to the electric system, the Customer is responsible for the cost of the modifications. The Interconnection Agreement will include payment details for these fees.

A Member's Guide to Interconnected Distributed Resource
(10MW or Less)

A Member's Guide to Interconnected Distributed Resource (10MW or Less)

OVERVIEW

Small generation resources interconnected with a power system are commonly referred to as a Distributed Resource, Distributed Generation, or an Interconnected Distributed Resource. Resources with a rated nameplate capacity of 10MW and less can sometimes be installed on a distribution line and therefore resources with a rated capacity of 10MW or less will be considered for connection to the distribution system.

Generation that is connected to the distribution system can have an impact on the safety, reliability, and quality of service of the distribution system. The potential impact is dictated by the type of device ("generator") that is used to produce the electricity, the electrical capacity of the generator, the location of the installation, and the protection and control that is installed on the Interconnected Distributive Resource.

Southern Pine Electric Cooperative, Inc. (the Cooperative) has provided this guide for members (Member) that are considering installing generation to offset their energy consumption or sell energy back onto the electrical grid. Due to safety and reliability issues, it is important for the Cooperative to be aware of any energy source that connects to the electrical meter or electrical distribution system in any way. The step by step interconnection process is detailed in the accompanying documents entitled "Application and Study Process Flow Chart", and "Installation Process Flow Chart".

The process begins with an application to install the distributed resource. The application shall be made and approval given prior to connecting the generator. The following table describes the application fees.

DEFINITIONS

This section provides some definitions that the Member may find helpful in preparing the application and reviewing the interconnection agreement.

Aggregate: In some situations, there may be multiple interconnected generators that are capable of producing electricity. The aggregate is the total nameplate rating of all generators in parallel with the distribution system at any time.

Demand: The demand is the maximum amount of electricity used or "demanded" during a time interval. Demand is different from energy because the demand is the rate at which the energy is used. For example, a Member may use significantly higher amounts of

electricity during certain times, such as when everyone is at home, various appliances are running, and any Member owned generation is unavailable due to maintenance, environmental conditions, etc (all electricity is being provided by the distribution system). Demand will be higher under these conditions since energy is being used at a higher rate. The Cooperative must have the ability to provide all the electricity requirements of the Member during these times (must be able to meet the demand for energy). A Member with a generator may use a relatively small amount of energy that is purchased from the Cooperative but cause a high demand to be placed on the distribution system when the generator is not running.

Energy: Energy is the term used for the amount of electricity that is used or generated. Energy is measured in kilowatt hours (kWh).

Isolated Generation: Isolated generation is not connected to the distribution system when it is generating electricity. Appropriate installation allows visual verification of isolation from the distribution system through a "break before make" transfer switch installed on the load side of the meter (the disconnect contacts should be visible without requiring tools to remove covers, etc). No studies will be required for isolated generation installations.

Momentarily Paralleled Generation: Momentarily paralleled generation produces electricity while remaining attached to the distribution system for no longer than 100 milliseconds. Appropriate installation allows visual verification of isolation from the distribution system through a transfer switch installed on the load side of the meter (the disconnect contacts should be visible without requiring tools to remove covers, etc).

Parallel Generation: Parallel generation produces electricity while remaining attached to the distribution system for longer than 100 milliseconds. Parallel generation must not be allowed to adversely affect the quality, reliability, or safety of the distribution system. Therefore, installation and operation requirements depend on many factors, including if the generation is exporting or non-exporting.

Generation (Exporting Mode): Exporting generation provides the load requirements of the Member and has excess power to flow onto the distribution system. The Member may be compensated for the power that flows onto the distribution system. Therefore, bi-directional metering equipment that can measure power flow in two directions may be required by the Cooperative.

Generation (Non Export Mode): Non-exporting generation provides only the load requirements (or part of the load requirements) of the Member and does not result in power flowing onto the distribution system. Even though the generation does not cause power to flow onto the distribution system, it is important that the Cooperative be aware of the installation so that it can be sure that the quality, reliability, and safety of the distribution system are not adversely affected.

Fast Track Project: Fast Track projects require no Facilities Study, and may be able to proceed at an accelerated rate. To qualify as a Fast Track Project, the proposed installation should have an aggregate capacity less than or equal to **25** kW, and the Member should be able to clearly demonstrate that the proposed installation meets applicable technical standards (IEEE 1547).

Facilities Study: A Facilities Study determines if any upgrades/modifications to the electrical distribution system will be required to accommodate the project, and also specifies the upgrades/modifications to the Cooperative's distribution system that are required and the estimated cost associated therewith.

The Member is required to pay all the costs associated with the Facilities Study. For smaller installations the Facility Study cost is established as a predetermined study fee. For larger installations that will likely require significant engineering analysis the Member is required to pay all costs associated with the study and a deposit is required prior to the study commencing. The following table summarizes the costs required to begin a Facilities Study.

Installed Aggregate Capacity	Facility Study Fee or Deposit
≤ 25 kW	Fast Track – No Study Fee
> than 25 kW but ≤ 100 kW	$ 250 Fee
> 100 kW but ≤ 1,000 kW	$ 500 Deposit + Actual Study Cost
> 1,000 kW≤ 10,000 kW	$ 500 Deposit + Actual Study Cost

Notes: In some instances, depending upon the aggregate generation planned, modifications to the transmission system may be required or a transmission interconnection may be more suitable. The Cooperative will coordinate with the Cooperative's power supplier (PowerSouth Energy Cooperative) to identify the required modifications and/or interconnection costs as a part of the Facilities Study Process. The costs incurred by the Cooperative's power supplier are considered as costs associated with the study.

Interconnection Agreement: The Interconnection Agreement is the contract between the Cooperative and the Member that grants the Member permission to operate the proposed generation resource in parallel to the Cooperative's distribution system. It indentifies the terms and conditions under which the parallel operation is allowed. It is emphasized that the Interconnection Agreement only provides for the connection of the resource and does not constitute an agreement to purchase the energy from the resource.

Purchase Power Agreement: A Purchase Power Agreement is a contract to purchase the energy that is exported to the distribution system from the generation resource. The Cooperative or PowerSouth Energy Cooperative may purchase the exported power from installations with an aggregate capacity less than **25 kW**, and PowerSouth Energy Cooperative may purchase the exported power from installations with an aggregate capacity of **25 kW** and greater. The Purchase Power Agreement identifies the Terms and Conditions of the agreement to buy the energy being exported, such as the frequency at which payments for energy exported will be made. The sale of the energy to parties other

than the Cooperative or PowerSouth Energy Cooperative is neither authorized nor permitted.

INSURANCE REQUIREMENTS

For projects requiring interconnection to the Cooperative's distribution system, the Member is responsible for maintaining liability insurance that is acceptable to the Cooperative. The amount of required insurance varies with the capacity of the generation proposed. The following table summarizes the insurance requirements.

Installed Aggregate Capacity	Liability Insurance Requirements
≤ 25 kW	**TBD**
> than 25 kW but ≤ 100 kW	**TBD**
> 100 kW but ≤ 1,000 kW	**TBD**
> 1,000 kW≤ 10,000 kW	**TBD**

For projects requiring interconnection to the Cooperative's power supplier's transmission system, the Member is responsible for maintaining liability insurance that is acceptable to the Cooperative's power supplier.

COST

The Member is required to pay all costs associated with connecting the distributed generation resource to the Cooperative's distribution system. A standard connection fee of **$ 0** is established to cover the cost of modifications to the metering and associated equipment, facilities inspection/testing (if required), and other administrative and overhead expenses incurred by the Cooperative for installations where the Member plans to export energy.

Should modifications be required on the distribution system, the Member is required to pay all costs associated with the upgrades/modifications to the Cooperative's distribution system. Additionally, on installations that are large (generally greater than 1,000 kW) modifications may be required by the Cooperative's power supplier to accommodate the installation. The Member is also required to pay those associated costs as well. The estimates for the modifications shall be identified in the Facilities Study (if required).

TECHNICAL REQUIREMENTS

IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power System is the recognized industry standard for distributed generation. All distributed resource installations must comply with IEEE 1547 in order to be allowed to interconnect with the Cooperative's distribution system. On small installations, "pre-packaged" equipment may allow the installation to comply with the protection aspects of IEEE 1547. For example, inverter-based systems that are certified UL 1741 generally meet the protection requirements of IEEE 1547. The Member should refer to IEEE 1547 for details regarding the specific technical requirements. The Cooperative has developed a document Technical Requirements for Connecting Distributed Generation that provides an **overview** of the key aspects. All installations must be certified as IEEE 1547 compliant in writing either by the manufacturer, a recognized independent testing laboratory, or by a Registered Professional Engineer prior to connection. The Cooperative reserves the right to verify compliance through inspection/testing.

A readily accessible, lockable, visible-break isolation switch device shall be located between the resource and the distribution system, unless the Cooperatives specifies that such a device is not required. The Cooperative will provide specifications for the isolation switch. The Member should gain approval for the proposed switch and the location prior to purchase and installation to assure that it is acceptable.

Pending Application for Operation of Member Owned Generation

OWNER/APPLICANT INFORMATION

Name:_____

Mailing Address:_____

City:_____County:_____State:_____Zip Code:_____

Phone Number:_____Representative:_____

Email Address:_____ Fax Number:_____

GENERATING FACILITY INFORMATION

Facility Information

Location:_____

Total Site Load _____ (kW)

Residential _____ Commercial _____ Industrial _____

Generator Information

Photovoltaic _____ Wind _____ Turbine _____

Reciprocating Engine _____ Other _____

Single Phase _____ Three Phase _____ PURPA Certification: Yes ___ No _____

Generator Rating _____ (kW) Annual Estimated Generation _____ (kWh)

Is the equipment UL1741 listed? Yes _____ No _____

If Yes, attach documentation (manufacturer's cut-sheet) showing UL1741 listing.

Is the equipment certified IEEE 1547 compliant? Yes _____ No _____

If Yes, attach documentation (manufacturer's cut-sheet) showing IEEE 1547 compliance.

Mode of Operation

Isolated _____ Parallel (Non Exporting) _____ Parallel (Exporting) _____

SIGN OFF AREA

The member agrees to provide the Cooperative with any additional information required to complete the application process and permit interconnection. The member shall operate their equipment within the guidelines set forth by and the terms and conditions as agreed upon with the Cooperative.

_____ _____

Applicant Date

Return to: Ryan Parr, System Engineer
P.O. Box 528, Brewton, AL 36427
(251) 867-5415 or rparr@southernpine.org