

2003



NARUC

**The National
Association
of Regulatory
Utility
Commissioners**

Model Interconnection Procedures and Agreement for Small Distributed Generation Resources

October 2003

Funded by the U.S. Department of Energy's
Office of Distributed Energy Resources
through the National Renewable
Energy Laboratory

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Disclaimer: The National Association of Regulatory Utility Commissioners ("NARUC") Model Procedures, Agreement and Application Forms for Small Distributed Generation Resources Interconnection in no way indicates an agreement on the part of NARUC or its member State regulatory authorities to cede jurisdiction over interconnection to or retail transactions on the distribution wires facilities over which the States exercise ratemaking or other regulatory authority as provided by State statute, rules, regulations and regulatory orders.

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INTRODUCTION

July 2002

Dear Colleagues and Distributed Generation Stakeholders:

Over the last few years, several States -- California, Texas, New York, and Ohio -- have completed distributed generation (DG) interconnection procedures and agreements for small generators after extensive stakeholder processes. Other States have begun to consider how to implement DG. The National Association of Regulatory Utility Commissioners (NARUC) has adopted a number of principles, policies, and resolutions recognizing the importance of DG to the nation's energy systems.

On October 25, 2001, the Federal Energy Regulatory Commission (FERC) initiated an Advance Notice of Proposed Rulemaking (ANOPR) aimed at Standardizing Generator Interconnection Agreements and Procedures (Docket No. RM02-1-000) applicable to interconnections subject to FERC jurisdiction. State commission representatives participating in the ANOPR process realized that this would be an opportune time for the States to develop model interconnection agreements and procedures for small generators to parallel the FERC process.

In an effort to harmonize State approaches to DG interconnection, NARUC passed a resolution in February of 2002 supporting the development of two model documents for voluntary adoption or adaptation by the States:

- DG Interconnection Procedures for States; and
- DG Interconnection Agreement for States

How Were These Documents Developed?

With the support of the U.S. Department of Energy and under the direction of a Commissioner Steering Committee, NARUC established a Staff Working Group composed of State interconnection experts including attorneys, engineers, and other State staff. Although numerous States were represented in the Steering Committee and the Staff Working Group, the core of the working group consisted of State staff from the four States with approved DG procedures. Their experience with DG implementation facilitated preparation of the documents. The working group conducted weekly conference calls and one "face-to-face" meeting in order to create draft model interconnection documents. These documents consist for the most part, of provisions that have been implemented by State commission orders and reflect the "best practices" of existing State procedures and agreements.

Early in this process, the decision was made to defer technical standards issues to existing State technical standards or to the ongoing IEEE process to adopt P1547 for interconnection of distributed generation. The decision was also made to identify policy issues that States would have to decide in implementing DG interconnection procedures and agreements, but not to dictate outcomes to States.

Call for Comments

In June 2002, NARUC released both the draft Interconnection Procedures (IP) and the draft Interconnection Agreement (IA) for broad stakeholder comment. The draft documents were distributed to at least 500 interested parties, including all State commissioners and to the participants in the IEEE P1547 process. Twenty-one sets of comments were received on the draft documents, reflecting a variety of State and industry participant views. The comments were taken under consideration in preparing the final Model DG Interconnection Documents.

The Purpose of These Documents

The documents produced for this DG project are intended to be resources for State commissions and industry stakeholders in their own DG efforts. Our hope is that the Model Interconnection Procedures and Agreement will serve as a catalyst for State DG interconnection proceedings.

As a part of this project, the National Regulatory Research Institute (NRRI) has developed a website with reference materials upon relevant to DG programs (www.nrri.ohio-state.edu/programs/electric/distributedgeneration). This website contains all of the documents produced by this project, as well as the procedures and agreements approved and implemented in California, Texas, New York, and Ohio, the full text of all comments filed on the documents, the responses of State commissions to NRRI's survey of the status of DG processes, and links to current State DG proceedings. In addition to the documents in this package, NARUC is requesting that NRRI prepare a subsequent document that will outline policy issues and discuss those decision points related to State implementation of distributed generation interconnection to further aid States in beginning their DG processes.

How Can States Use These Documents?

None of these documents represent “preferences” regarding the “technical and policy” issues that States have to make. Instead, they are intended to provide information that readers and users of the products can use to understand the issues and the relative merits as if they had been participants. This will be especially useful to commissioners and staff at the beginning of proceedings in their own jurisdictions.

These documents and the information on the NRRI website can be a platform from which to begin workshops, collaboratives, exchanges of technical papers, formal proceedings, or any other type of forums deemed appropriate for considering and implementing DG processes. The hope of the Steering Committee and the Staff Working Group is that these documents and the accompanying website material we have assembled will prove to be valuable tools to all participants in State DG processes.

Respectfully submitted,

Bob Anderson
Co-Chair, Steering Committee
Chair, NARUC Committee on Energy Resources and the Environment

Marsha H. Smith
Co-Chair Steering Committee
Chair, NARUC Committee on Electricity

***Resolution Endorsing Enhancements to the Model Interconnection
Agreement and Procedures***

WHEREAS, NARUC adopted The Resolution Endorsing the Model Interconnection Agreement and Procedures on July 31, 2002; *and*

WHEREAS, the Working Group of commissioners and staff overseeing the development of the model committed to provide clarification of outstanding policy and technical issues in the Model; *and*

WHEREAS, the Federal Energy Regulatory Commission (FERC) issued an Advanced Notice of Proposed Rulemaking (ANOPR) on August 16, 2002, in Docket No. RM02-12 on Interconnections for Small Generators; *and*

WHEREAS, In the FERC ANOPR process, NARUC and State staff members participated in a series of stakeholder meetings, consisting of the States, the Interconnection Providers, and the Small Generation Coalition, which advanced the policy and technical interconnection issue discussion; *and*

WHEREAS, As a result of these stakeholder discussions, NARUC filed with FERC an amended version of its Model Interconnection Agreement and Procedures on January 31, 2003, that remained true to the principles of the adopted NARUC Model, while incorporating resolution of some technical and policy issues; *now therefore be it*

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened in its February 2003 Winter Meetings in Washington, DC, recommends use of these enhancements to the model interconnection agreement and procedures previously adopted as a resource when and if a State pursues the establishment of a distributed energy resource interconnection process; *and be it further*

RESOLVED, That the Board appreciates the efforts of NARUC and State staff members who participated in the ANOPR process and produced these enhancements and that the Board appreciates the state Commissions for devoting staff time to this significant effort to assist other states. The Board especially acknowledges and appreciates the leadership of staff members Jan Karlak (Ohio PUC) and Charles Puglisi (New York PSC).

Sponsored by the Committee on Electricity and the Committee on Energy Resources and the Environment

Adopted by the NARUC Board of Directors February 26, 2003

Resolution Endorsing the Model Interconnection Agreement and Procedures

WHEREAS, The *Resolution to Adopt Full and Open Access Rules for Distributed Generation Technologies and to Remove Regulation Barriers and Promote “Best Practices” That Encourage Economic Deployment of Distributed Generation Technologies*, adopted at the Summer Meeting on July 26, 2000, reviewed the many and substantial benefits and potential benefits of Distributed Generation and Distributed Energy Resources, and also set forth the National Association of Regulatory Utility Commissioners’ (NARUC’s) many prior resolutions and actions in support of Distributed Energy Resources; and

WHEREAS, Several State legislatures and State Commissions have addressed utility specific requirements for interconnection to electric power systems for the safe and reliable operation of distributed generation technologies; and

WHEREAS, Prior resolutions have recognized that coordination among the States could improve the consistency of treatment so important to the efficient integration of distributed energy resources; and

WHEREAS, Increased national consistency will lower entry barriers and enhance business economic efficiency, yet overly prescriptive national standards would fail to allow for real differences among States, utilities, and customers, and the ready availability of NARUC developed model agreements and procedures will aid in balancing those concerns; and

WHEREAS, The preparation of model interconnection agreement and procedures by NARUC could provide significant support and efficiencies to those States which have yet to address the challenges of distributed energy resources, and the consideration, adaptation or adoption of such models could provide material assistance in achieving the coordination among the States called for by previous resolutions; and

WHEREAS, NARUC adopted a Resolution Endorsing the Development of Model Interconnection Agreement and Procedures at its February 2002 Winter Meetings in Washington, D.C. endorsing the development of a model interconnection agreement and procedures under the direction of its Committees on Electricity, Energy Resources and the Environment and Finance and Technology; and

WHEREAS, The resolution requested that the process begin with the review and synthesis of the significant accomplishments of those States which have already addressed, or have begun the process of addressing the issues and challenges presented by distributed energy resources and their access and interconnection to State jurisdictional electric power systems; and

WHEREAS, A Working Group of Commissioners and staff was established, which - with funding from the U.S. Department of Energy’s National Renewable Energy Laboratory - created a model interconnection agreement and procedures which was, for the most part, compiled from the “best practices” of States that had previously held fully open, fair proceedings to address interconnections of distributed energy resources; and

WHEREAS, The model interconnection agreement and procedures were widely distributed to the State commissions and industry stakeholders and comments have been received and reviewed by the Working Group, who incorporated suggestions into the model that were consistent with the intent of the model and previously adopted State distributed generation products; and

WHEREAS, The Working Group has taken the extra step to prepare a complete reference package to start a State proceeding that includes not only the model interconnection agreement and procedures but also an explanation of the policy decisions required before an individual State adopts an interconnection process along with examples of how other States have solved the policy issues and includes the comments received during this development process; now therefore be it

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened at its July 2002 Summer Meetings in Portland, Oregon, recommends use of the model interconnection agreement and procedures developed by the Working Group as a resource when and if a State pursues the establishment of a distributed energy resource interconnection process; and be it further

RESOLVED, That the Board requests that the National Regulatory Research Institute (NRRI) prepare a subsequent document that would outline policy issues and discuss those decision points related to State implementation of distributed generation interconnection; and be it further

RESOLVED, That the Board appreciates the efforts of the Working Group members who produced the model interconnection agreement and procedures in an expedited effort to ensure that these materials were available in a timely manner, and that the Board appreciates the State Commissions for devoting staff time to this significant effort to assist other States. The Board especially acknowledges and appreciates the leadership of staff members Jan Karlak (Ohio PUC), Diane Barney (New York PSC), and Lou Ann Westerfield (Idaho PUC) on this project.

Sponsored by the Committee on Electricity, the Committee on Finance and Technology, and the Committee on Energy Resources and the Environment
Adopted by the NARUC Board of Directors July 31, 2002

Model Interconnection Procedures for Small Distributed Parallel Generation Equipment

SECTION I APPLICATION PROCESS:

A. Applicability and Definitions

1. The following interconnection procedures are available to Interconnection Customers proposing to interconnect small distributed generation resources (hereinafter “Small Resources”) if
 - a. The Interconnection Customer submits a Completed Application and states the purpose for which the Small Resource is to be installed; and
 - b. The Interconnection Customer’s proposed Small Resource meets the Codes, Standards, Certification Requirements of Appendices B, and C of these Procedures. The Interconnection Customer must also meet the requirements of Section II, or otherwise qualify under the procedures set forth in Section II A. 6-8, if screens are failed by a Small Resource that still may be interconnected safely and reliably.

Proposed Small Resources that meet these requirements will be entitled to interconnection approval as provided for in Section II.

2. Proposed Small Resources that do not meet these requirements will be evaluated through the appropriate feasibility, system impact and/or facilities studies as set forth in Section III.
3. Terms used herein shall have the meanings specified in the glossary of terms appended as Appendix A.
4. Neither these procedures nor the requirements included hereunder apply to small generation equipment packages interconnected or approved for interconnection with electric power transmission or distribution systems prior to 60 business days after the effective date of these procedures.

SECTION II SUPER-EXPEDITED REVIEW PROCESS:

A. Process for Super Expedited Approval of Small Resources

1. Pre-Application - To assist an Interconnection Customer in the interconnection process, the Interconnection Provider will designate an employee or office from which information on the application process and on the affected system of an electric power transmission or distribution provider can be obtained through informal requests from by the Interconnection Customer presenting a proposed project for a specific site. System information provided to Interconnection Customers should include relevant system studies, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the system; to the extent, such provision does not violate confidentiality provisions of prior agreements, or critical infrastructure requirements. The Interconnection Provider shall comply with reasonable requests for such information.

2. Application - The Interconnection Customer shall submit an application in the form in Attachment 1 - “Short Form Application for Single Phase Attachment of Parallel Generation Equipment 20 kV or Smaller to the Electric System” or the form in Attachment 2 - “Standard Application for Attachment of Parallel Generation Equipment to the Electric System” for single phase equipment larger than 20 kV or for three-phase equipment of any size to the Interconnection Provider, to include information regarding certification or Underwriters Laboratory listing of the Interconnection Customer’s Small Resource equipment. The Application form is to be submitted to the Interconnection Provider along with the cost-based processing fee required by the Interconnection Provider. Applications shall be date-and time-stamped upon receipt. The original date-and time-stamp applied to the Application at the time of its original submission for interconnection shall be accepted as the qualifying date-and time-stamp for the purposes of any timetable in these Procedures. The Interconnection Customer will be provided with a notification of receipt by the Interconnection Provider **within 3 business days** of receiving the Interconnection Customer’s Application. The Interconnection Provider will notify the Interconnection Customer within 10 business days of the receipt of the Application as to whether the Application is complete or incomplete.

If the Application is complete, the Interconnection Provider shall notify the appropriate high voltage transmission service provider in accordance with any interconnection notification protocols as provided for in the high voltage transmission provider’s Open Access Transmission Tariff on file

with the Federal Energy Regulatory Commission (FERC).¹ If the Application is incomplete, the Interconnection Provider will provide along with the Notice that the Application is incomplete, a written list detailing all information that must be provided to complete the application. The Interconnection Customer will have 10 business days after receipt of the Notice to submit the listed information or to request an extension of time to provide such information. If the Interconnection Customer does not provide the listed information or a request for an extension of time within the **10 business day deadline**, the Application will be deemed withdrawn. An Application will be complete upon submission of the listed information to the Interconnection Provider.²

3. Modification of the Application - Any modification to machine data or equipment configuration or to the interconnection site of the Small Resource not agreed to in writing by the Interconnection Provider and the Interconnection Customer may be deemed a withdrawal of the Application and may require submission of a new Application, unless proper notification of each party by the other and a reasonable time to cure the problems created by the changes are undertaken.
4. Site Control - Documentation of site control must be submitted for Small Resource additions with the Complete Application. Site control may be demonstrated through
 - a. Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing a Small Resource Facility
 - b. An option to purchase or acquire a leasehold site for such purpose;
or
 - c. An exclusivity or other business relationship between Small Resource Facility and the entity having the right to sell, lease or grant the Small Resource Facility the right to possess or occupy a site for such purpose.

¹ If such protocols are not available in the high voltage transmission provider's FERC-filed tariff, the Interconnection Provider owning or operating the State-regulated electric power distribution facilities should notify the owner or operator of the facilities from whom the State-regulated electric power company receives transmission service.

² In general, having deadlines to complete studies and interconnections serves the purpose of prioritizing the distribution Interconnection Provider's work. In light of other work on the distributions systems directly serving the ultimate end-use Interconnection Customers, utilities are expected to plan interconnections accordingly.

5. Initial Review - **Within 15 business days** after Interconnection Provider notifies Interconnection Customer it has received a Complete Application the Interconnection Provider shall perform an Initial Review using the primary and secondary screening criteria set forth below, shall notify Interconnection Customer of the results and include with the notification copies of the analysis and data underlying the Interconnection Provider's determinations under the screens. The fee for the initial review shall be cost-based and may be designed to cover the average length of time spent by the Interconnection Provider, including time spent to determine necessary options for minor modifications to be recommended to the Interconnection Customer, as noted below.

a. **Primary Screening Criteria**

The primary screens required in this section include the following:

- i. For interconnection of a proposed Small Resource to a radial distribution circuit, the aggregated generation, including the proposed Small Resource, on the circuit will not exceed **5%** of the total circuit annual peak load as most recently measured at the substation.
- ii. For interconnection of a proposed Small Resource to the load side of spot network protectors, the proposed Small Resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of **5%** of a spot network's maximum load or **50 kW**.
- iii. The proposed Small Resource cannot be connected on the load side of a secondary network protector, except as allowed under the Primary Screen ii above for a spot network.
- iv. The proposed Small Resource, in aggregation with other generation on the distribution circuit, will not contribute more than **10%** to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.
- v. The proposed Small Resource, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but not limited to substation breakers, fuse cutouts, and line

reclosers), or Interconnection Customer equipment on the system to exceed **85%** of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds **85%** of the short circuit interrupting capability.

- vi. The proposed Small Resource, in aggregate with other generation interconnected to the distribution low voltage side of the substation transformer feeding the distribution circuit where the Small Resource proposes to interconnect, will not exceed **10 MWS** in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g., 3 or 4 transmission voltage level busses from the point of interconnection).
- vii. For interconnection of a proposed single-phase Small Resource where the primary distribution system is three-phase, four-wire, the Small Resource will be connected line-to-neutral. For interconnection of a proposed single-phase Small Resource where the primary distribution system is three-phase, three-wire, the Small Resource will be connected line-to-line.
- viii. For interconnection of a proposed three-phase Small Resource to a three-phase four-wire distribution circuit or a distribution circuit having mixed three-wire and four-wire sections, the aggregate generation capacity including the proposed Small Resource will not exceed **10%** of line section peak load.
- ix. If the proposed Small Resource is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Resource, will not exceed **20 kVA**.
- x. If the proposed Small Resource is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition will not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.
- xi. The proposed Small Resource's point of common coupling will not be on a transmission line.

b. **Secondary Screening Criteria** (for proposed Small Resources that do not meet the Primary Screening Process criteria)

The secondary screens include the following:

- i. For interconnection of a proposed Small Resource to a radial distribution circuit, the new Small Resource's capacity in aggregate with other generation on the circuit will not exceed **15%** of total circuit peak load as most recently measured at the substation; nor will it exceed **15%** of a distribution circuit line section annual peak load. A line section is defined as that section of the distribution system between two sectionalizing devices in the area electric power system, as defined in national industry standards.
- ii. For interconnection of a proposed Small Resource to the load side of spot network protectors, the proposed Small Resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of **5%** of a spot network's maximum load or **50 kW** and must comply with all requirements of approved industry standards for interconnection technical specifications and requirements.
- iii. For the interconnection of a proposed Small Resource to any network, the Small Resource must utilize a protective scheme that will ensure that its current flow will not affect the network protective devices including reverse power relays or a comparable function. Synchronous Small Resources cannot be interconnected into a secondary network.
- iv. For interconnection of a proposed Small Resource that is an induction generator or that utilizes inverter-based protective functions, both of which include reverse power relay functions, the Small Resource's total net generating capacity, in aggregate with other Small Resources interconnected on the load side of network protective devices, does not exceed the lesser of **10%** of the minimum load on the network or **50 kW**. A Small Resource does not export to any network.
- v. The proposed Small Resource, in aggregation with other generation on the distribution circuit, will not contribute more than **10%** to the distribution circuit's maximum fault

current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

- vi. The proposed Small Resource *in aggregate* with other generation on the distribution circuit will not cause any distribution equipment, protective devices (including but not limited to substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed **90%** of their short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds the **90%** short circuit interrupting capability limit.
- vii. The proposed Small Resource's point of common coupling will not be on a transmission line.

6. Interconnection Agreement

- a. If the Initial Review determines that the proposed interconnection passes the Primary Screens the interconnection application will be approved and the Interconnection Provider will provide Interconnection Customer an executable Interconnection Agreement **within 5 business days** after the determination.
- b. If the Initial Review determines that the proposed interconnection passes the Secondary Screens and fails one or more of the Primary Screens, but the Interconnection Provider determines through the Initial Review that the Small Resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Interconnection Provider will provide the Interconnection Customer an executable Interconnection Agreement **within 5 business days** after the determination.
- c. If the Initial Review determines that the proposed interconnection fails both Screens, but the Interconnection Provider determines through the Initial Review that the Small Resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Interconnection Provider will provide Interconnection Customer an executable Interconnection Agreement **within 5 business days** after the determination.
- d. If the Initial Review determines that the proposed interconnection fails one or more of the Primary Screens and passes all of the Secondary Screens, but the Interconnection Provider does not or cannot determine from the Initial Review that the Small Resource may nevertheless be interconnected consistent with safety,

reliability, and power quality standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Interconnection Provider will provide the Interconnection Customer with the opportunity to attend an Interconnection Customer Options Meeting.

7. Interconnection Customer Options Meeting - If the Interconnection Provider determines the Application cannot be approved without minor modifications at minimal cost; or a Supplemental Study or other additional studies or actions; or at significant cost to address safety, reliability, or power quality problems, **within the 5 day period** after the determination the Interconnection Provider shall notify the Interconnection Customer and provide copies of all data and analyses underlying its conclusion. **Within 10 business days** of the Interconnection Provider's determination, the Interconnection Provider shall offer to convene a Custom Options Meeting with the Interconnection Provider to review possible Interconnection Customer facility modifications or the Secondary Screen analysis and related results, to determine what further steps are needed to permit the Small Resource to be connected safely and reliably under the Super-expedited Process. At the time of notification of the Interconnection Provider's determination, or at the Interconnection Customer Options Meeting, the Interconnection Provider shall:
 - a. Suggest the Interconnection Customer facility modifications or minor modifications to the Interconnection Provider's system (e.g., changing meters, fuses, relay settings) and include a good faith estimate of the limited cost to make such modifications to the Interconnection Provider's system; or
 - b. Offer to perform Supplemental Review if the Interconnection Provider concludes that supplemental review might determine that the Small Resource could continue to qualify for interconnection pursuant to Super-expedited Process, and provide a good faith estimate of the costs of such review; or
 - c. Obtain the Interconnection Customer's agreement to move the Application to a Scoping Meeting for a discussion of modifications that are not minor or of potential impacts on the electric distribution power system or the nearest high voltage transmission system that may require more than a Supplemental Review.

8. Supplemental Review - If the Interconnection Customer agrees to a Supplemental Review, the Interconnection Customer shall agree in writing **within 15 business days** of the offer, and submit a deposit for the

estimated costs. The Interconnection Customer shall be responsible for the actual costs of the Supplemental Review.

Within 10 business days following receipt of the deposit for a Supplemental Review, the Interconnection Provider will determine if the Small Resource equipment can be interconnected safely and reliably under Super-expedited Process.

- a. If so, the Interconnection Provider shall forward an executable Interconnection Agreement to Interconnection Customer **within 5 business days**.
- b. If so, and Interconnection Customer Facility modifications are required to allow the Small Resource equipment to be interconnected consistent with safety, reliability, and power quality standards under the Super-expedited Process, the Interconnection Provider shall forward an executable Interconnection Agreement to Interconnection Customer **within 5 business days** after confirmation that the Interconnection Customer has agreed to make the necessary changes at the Interconnection Customer's cost.
- c. If so, and minor system modifications are required to allow the Small Resource equipment to be interconnected consistent with safety, reliability, and power quality standards under the Super-expedited Process, the Interconnection Provider shall forward an executable Interconnection Agreement to the Interconnection Customer **within 10 business days** that requires the Interconnection Customer to pay the costs of such system modifications prior to interconnection.
- d. If not, the Application will proceed directly to a Scoping Meeting and the Interconnection Provider shall notify the appropriate high voltage transmission service provider in accordance with interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC.³ **[NOTE: The Application is now no longer in the Super-expedited Process.]**

³ If such protocols are not available in the high voltage transmission provider's FERC-filed tariff, the Interconnection Provider owning or operating the State-regulated electric power distribution facilities should notify the owner or operator of the facilities from whom the State-regulated electric power company receives transmission service.

SECTION III. APPLICATIONS THAT DO NOT MEET THE SUPER-EXPEDITED PROCESS REQUIREMENTS:

A. Scoping Meeting

The Scoping Meeting described herein is available to an Interconnection Customer whose Application for interconnection to an electric distribution power system can no longer be considered in the Super-expedited Process.

1. At the request of either Party, a Scoping Meeting will be held **within 10 business days**, or as otherwise mutually agreed to by the Parties, after the Interconnection Provider notifies the Interconnection Customer that the Application cannot continue to be reviewed in the Super-expedited Process. The Interconnection Provider and Interconnection Customer will bring to the meeting personnel, including system engineers, and other resources as may be reasonably required to accomplish the purpose of the meeting.
2. The purpose of the Scoping Meeting shall be to discuss the Interconnection Customer's interconnection request, and review existing studies relevant to the Interconnection Customer's interconnection request. The Parties shall further discuss whether the Interconnection Provider should perform a Feasibility Study or proceed directly to a System Impact Study, or a Facilities Study, or an Interconnection Agreement. If the parties agree that a Feasibility Study should be performed, the Interconnection Provider will provide Interconnection Customer, as soon as possible, but not later **than 5 business days** after the Scoping Meeting, a Feasibility Study Agreement including an outline of the scope of the study and a good faith estimate of the cost to perform the study.
3. The Scoping Meeting may be omitted by mutual agreement, and the reasonable cost of a Scoping Meeting will be credited from the Application Fee toward the cost of the Feasibility Study. In order to remain in consideration for interconnection at the distribution level or, as appropriate, in a high voltage transmission provider's interconnection queue, the Interconnection Customer who has requested a Feasibility Study must return the executed Feasibility Study Agreement **within 15 business days**. If the Parties agree not to perform a Feasibility Study, the procedures in the appropriate sections below will apply.

B. Feasibility Study

1. A Feasibility Study will include the following analyses for the purpose of identifying any potential Violations that would result from the interconnection of the Small Resource as proposed:

- a. Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
 - b. Initial identification of any thermal overload or voltage limit violations resulting from the interconnection
 - c. Initial review of grounding requirements and system protection; and
 - d. Description and non-binding estimated cost of facilities required to interconnect the facility to an electric distribution power system or directly to a high voltage transmission system and to address the identified short circuit and power flow issues.
2. A Feasibility Study will model the impact of the Small Resource regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Resource is being installed.
3. A Feasibility Study will include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
4. A deposit of the lesser of fifty percent of estimated Feasibility Study costs or earnest money of \$1,000 shall be required from the Interconnection Customer. Any study fees shall be based on actual costs as approved by the State regulatory authority and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time. An Interconnection Customer must pay any Study fees that exceed the deposit within 20 business days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Interconnection Provider will refund such excess within 20 business days of the invoice without interest. In performing the Feasibility Study, the Interconnection Provider shall rely, to extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer will not be charged for such existing studies; however, the Interconnection Customer will be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the Feasibility Study.
5. Once the Feasibility Study is completed, a Feasibility Study report will be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, a Feasibility Study must be completed and the

Feasibility Study Report transmitted **within 30 business days** of the Interconnection Customer's agreement to conduct a Feasibility Study.

6. If the Feasibility Study shows no potential for transmission or distribution Violations, the Interconnection Provider will send the Interconnection Customer a Facilities Study Agreement, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, pursuant to subsection D., below. If no additional facilities are required, the Interconnection Provider will send the Interconnection Customer an Interconnection Agreement.
7. If the Feasibility Study shows the potential for transmission or distribution system Violations, the review process will proceed to the appropriate Impact Study(s).

C. Impact Study Procedures and Criteria

1. The purpose of an Impact Study is to identify and detail the system impacts that would result if the proposed unit were interconnected without project modifications or system modifications, focusing on the Violations identified in the Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting. The Impact Study shall evaluate the impact of the proposed interconnection on the reliability of the high voltage transmission system and/or the electric power distribution system.

If the Interconnection Provider uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required network system upgrades, the Impact Study will consider all generating facilities (and with respect to paragraph c. below, any identified System Upgrades associated with such higher queued interconnection) that, on the date the Impact Study, are commenced and--

- a. Are directly interconnected to the high voltage transmission system and/or electric power distribution system; or
 - b. Are interconnected to Affected Systems and may have an impact on the Interconnection Request; and
 - c. Have a pending higher queued Interconnection Request to interconnect to the high voltage transmission and/or the electric power distribution system.
2. The Impact Study will consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as

necessary. The Impact Study will state the assumptions upon which it is based; state the results of the analyses; and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. The Impact Study will provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

3. Distribution Impact Study. If no Transmission Impact Study is required, but potential electric power distribution system Violations are identified in the Scoping Meeting, shown in the Feasibility Study, or the Small Resource failed to meet the requirements of the Primary and Secondary Screens in Section II A.5 above, a Distribution Impact Study must be performed. The Interconnection Provider will send the Interconnection Customer a Distribution Impact Study Agreement within 15 business days of transmittal of a Feasibility Study Report, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, or following the Scoping Meeting if no Feasibility Study is to be performed. The Distribution Impact Study will incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, and the impact on system operation, as necessary. A deposit of the equivalent of the estimated cost of the study may be required from the Interconnection Customer. A Distribution Impact Study should be completed within 30 business days from receipt of the Impact Study agreement and deposit. Any increase of Distribution Impact Study costs above the good-faith estimate provided may be subject to dispute resolution.
4. Transmission Impact Study. In instances where a Feasibility Study or a Distribution Impact Study shows potential for high voltage transmission system Violations, within **5 business days** following transmittal of the Feasibility Study Report, the Interconnection Provider shall notify the appropriate high voltage transmission service provider in accordance with any interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC. The Interconnection Provider also will send the Interconnection Customer a Transmission Impact Study Agreement, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, if such a study is required. If a Transmission System Impact Study is not required, but electric power distribution system Violations are shown by the Feasibility Study to be possible and no Distribution Impact Study has been conducted, the Interconnection Provider will send the Interconnection Customer a

Distribution Impact Study Agreement. If the Feasibility Study shows no potential for high voltage transmission system or electric power distribution system Violations, the Interconnection Provider will send the Interconnection Customer either a Facilities Study Agreement, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, or an Interconnection Agreement, as applicable.

In order to remain under consideration for interconnection, the Interconnection Customer must return an executed Transmission Impact Study Agreement, if applicable, **within 30 business days**. A deposit of the equivalent of half the estimated cost of the impact study. Interconnection Customers must pay any Study Costs that exceed the deposit **within 20 business days** of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, Interconnection Provider will return such excess **within 20 business days** of the invoice without interest. Any Impact Study required should be completed **within 45 business days** of the receipt of the Transmission Impact Study Agreement or in accordance the high voltage transmission provider's queuing procedures approved by the FERC. Any increase of Transmission Impact Study costs above the good-faith estimate provided may be subject to dispute resolution.

5. Where high voltage transmission systems and electric power distribution systems have separate owners, such as is the case with transmission-dependent utilities ("TDUs")--whether investor-owned or not, the Interconnection Customers may apply to the nearest high voltage transmission provider (Transmission Owner, Regional Transmission Operator, Independent Transmission Interconnection Provider, or Independent Transmission Provider) providing transmission service to the TDU to request project coordination if that high voltage transmission provider is notified in accordance with any interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC.

D. Facilities Study

Once the required Impact Study is completed, an Impact Study report will be prepared and transmitted to the Interconnection Customer along with a Facilities Study Agreement **within 5 business days**, including an outline of the scope of the study and a good faith estimate of the cost to perform the Facilities Study. In the case where one or both Impact Studies are determined to be unnecessary, a notice of the fact that no report is necessary will be transmitted to the Interconnection Customer within the same timeframe. In order to remain under consideration for interconnection, or, as appropriate, in the high voltage transmission provider's interconnection queue, the Interconnection Customer must return the executed Facilities Study Agreement or a request for an extension of time **within 30 business days**. A deposit of the equivalent of the estimated cost of the study may

be required from the Interconnection Customer. If no high voltage transmission system or electric power distribution system interconnection facilities are required, the Facilities Study will not be required and the project will proceed directly to the execution of an Interconnection Agreement.

1. Study Preparation – High voltage transmission system and/or electric power distribution system interconnection design for any required Interconnection Facilities and/or System Upgrades will be performed under a Facilities Study Agreement between the Interconnection Customer and the Interconnection Provider. The Interconnection Provider may contract with consultants, including contractors acting on behalf of the high voltage transmission service provider or the electric power distribution service provider, as appropriate, to perform the bulk of the activities required under the Facilities Study Agreement. In some cases, the Interconnection Customer and the Interconnection Provider may reach agreement allowing the Interconnection Customer to separately arrange for the design of some of the required high voltage transmission or electric power distribution interconnection facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by the Interconnection Provider, under the provisions of the Facilities Study Agreement. If the Parties agree to separately arrange for design and construction and provided security and confidentiality requirements can be met, Interconnection Providers shall make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.
2. System Upgrades - In cases where System Upgrades are required, the Facilities Study must be completed **within 45 business days** of the receipt of the Facilities Study Agreement. In cases where no System Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the Facilities Study must be completed in **30 business days**.
3. Costs of Facilities and Cost Responsibility - Where additional facilities are required to permit the interconnection of a Small Resource, and offer no benefit to system capacity, the Interconnection Customer will bear the entire reasonable cost of such facilities as determined by the Facilities Study and at the actual cost provided for in the Facilities Study Agreement, but will not be subject to retroactive increases or decreases in such costs, unless determined by credits or refunds provided by mutual agreement with subsequent interconnection Customers.
4. Grouping of Facilities - An Interconnection Provider may propose to group facilities required for more than one Interconnection Customer addition in order to minimize facilities costs through economies of scale,

but any Interconnection Customer may require the installation of facilities required for its own system if it is willing to pay the costs of those facilities.

5. Benefits to the System – If the Small Resource was invited or otherwise selected to provide benefits to the Interconnection Provider’s system, costs charged to the interconnection Customer will be reduced commensurate with such benefit. Benefits must be measurable and verifiable. Where multiple interconnection requests require system facilities, interconnection Customers will be assigned costs or benefits separately where impacts can be separately attributed to respective projects. Where such attribution is not possible, interconnection Customers will share costs or benefits in proportion to their projected facility capacities.

E. Reasonable Efforts

The Interconnection Provider shall make reasonable efforts to meet all time frames provided in these procedures unless the Interconnection Provider and the Interconnection Customer agree to a different schedule. If an Interconnection Provider cannot meet a deadline provided herein, it shall notify the Interconnection Customer, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process. The Interconnection Provider shall maintain records, subject to audit, of all Small Resource Applications received, the times required to complete application approvals and disapprovals, and justification for the actions taken on the Applications.

F. Dispute Resolution

1. If a dispute arises at any time during these procedures, either the Interconnection Customer or the Interconnection Provider may seek immediate resolution through complaint procedures available through the jurisdictional regulatory authority or any alternative dispute resolution process as approved by the jurisdictional regulatory authority, by providing written notice to the jurisdictional regulatory authority and the other party stating the issues in dispute. Pursuit of dispute resolution will not affect an Interconnection Customer’s Application with regard to consideration for interconnection nor position in a high-voltage transmission provider’s queue. At the outset, either party may require that such dispute resolution will be binding. Where possible, dispute resolution will be conducted in an informal, expeditious manner in order to reach resolution with minimal costs and delay. When appropriate and available, the dispute resolution may be conducted by phone or through Internet communications.

2. Technical Master - In addition to a jurisdictional regulatory authority or other dispute resolution resources, the State regulatory authority, upon request and in accordance with its jurisdictional authority, may appoint a technical master to resolve technical disputes arising under these procedures. The technical masters will be qualified engineers—with expertise in high voltage transmission or electric power distribution interconnection requirements.

G. Interconnection Metering

Any metering necessitated by the use of the Small Resource shall be installed at the Interconnection Customer's expense in accordance with State or local regulatory requirements or the Interconnection Provider's specifications.

H. Commissioning

Commissioning tests of an Interconnection Customer's installed equipment will be performed pursuant to applicable codes and standards. The Interconnection Provider must be given **5 business days** written notice, or as otherwise mutually agreed to by the Parties, of the tests and may be present to witness the commissioning tests.

I. Confidentiality

In accordance with operative State laws, State regulatory rules or orders, each Party shall hold in confidence and shall not disclose Confidential Information to any person (except employees, officers, representatives and agents that agree to be bound by this provision), except as required by law. Confidential Information shall mean any confidential and/or proprietary information provided by one Party ("Disclosing Party") to the other Party ("Receiving Party") that is clearly marked or otherwise designated "Confidential." For purposes of procedures all design, operating specifications, and metering data provided by Small Resource shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such. Confidential Information shall not include information that the Receiving Party can demonstrate --

1. Is generally available to the public other than as a result of a disclosure by the Receiving Party;
2. Was in the lawful possession of the Receiving Party on a non-confidential basis before receiving it from the Disclosing Party;
3. Was supplied to the Receiving Party without restriction by a third party, who, to the knowledge of the Receiving Party, was under no obligation to the Disclosing Party to keep such information confidential;

4. Was independently developed by the Receiving Party without reference to Confidential Information of the Disclosing Party; or
5. Was disclosed with the prior written approval of the Disclosing Party. If a Party believes it is required by law to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of these procedures.

Glossary of Terms

Affected Systems – means any electric system that is either directly or indirectly connected to the Interconnection Provider’s electric system that could be adversely affected by the interconnection and parallel operation of the Interconnection Customer’s Small Resource.

Agreement – means an Interconnection and Parallel Operation Agreement for Small Distributed Generation Resources by and between the Interconnection Provider and the Interconnection Customer.

Automatic Disconnect Device – an electronic or mechanical switch used to isolate a circuit or piece of equipment from a source of power without the need for human intervention.

Dedicated Service Transformer or Dedicated Transformer – a transformer with a secondary winding that serves only one customer.

Delivery Service means the services the Company may provide to deliver capacity or energy generated by Customer to a buyer to a delivery point(s), including related ancillary services.

Disconnect (verb) - To isolate a circuit or equipment from a source of power. If isolation is accomplished with a solid-state device, “disconnect” shall mean to cease the transfer of power.

Disconnect Switch – a mechanical device used for isolating a circuit or equipment from a source of power.

Distributed Generation Equipment - includes any on-site Small Resources: distributed generation facilities, self-generators, small electric generation facilities and electric customer-generators.

FERC – means the Federal Energy Regulatory Commission

IEEE – means Institute of Electrical and Electronics Engineers, Inc., a non-profit technical professional organization responsible with members in 150 countries, responsible for technical publishing, conferences, and consensus-based standards activities. (www.ieee.org)

Islanding – a condition in which a portion of the Interconnection Provider’s system that contains both load and a Small distributed generator resource is isolated from the remainder of the Interconnection Provider’s system [adopted from the Institute of Electrical and Electronics Engineers (IEEE)].

Point of Common Coupling (PCC) - The point at which the interconnection between the Interconnection Provider’s system and the Interconnection Customer’s equipment interface occurs. Typically, this is the customer side of the Interconnection Provider’s revenue meter [adopted from IEEE 929-2000.]

Pre-certified, pre-certification – A specific generating and protective equipment system or systems that have been certified and documented as meeting applicable test requirements and

standards relating to safety and reliability by a nationally recognized testing laboratory or, in the absence of such test requirements and standards, by tests and standards approved by the State regulatory commission.

Radial Feeder - a distribution line that branches out from a substation and is normally not connected to another substation or another circuit sharing the common supply of electric power.

Short Circuit Contribution – the result of dividing the maximum short circuit contribution of the distributed Small Resources(s) by the short circuit contribution available from the Company system without the distributed Small Resource(s), converted to a percentage.

Small Resource - includes any on-site Small Resources such as distributed generation facilities, self-generators, small electric generation facilities and electric customer-generators (see also “Distributed Generation Equipment”)

System Impact Study – any study or studies performed by an Interconnection Provider or a designated third party to ensure that the safety and reliability of the electric power system with respect to the interconnection of Small Resources as discussed in this document.

Type Test - a test performed or witnessed once by a qualified independent testing laboratory for a specific protection package or device to determine whether the equipment can be certified.

UL – means Underwriters Laboratory, Inc., an independent, not-for-profit product safety testing and certification organization operating in Canada, Europe, Asia, Latin America, and the U.S.A. (www.ul.com)

Company Grade Relay - a relay that is constructed to comply with, as a minimum, the most current version of the industry standards for non-nuclear Company facilities:

Verification Test - a test performed upon initial installation and repeated periodically to determine that there is continued acceptable performance.

Appendix B**Codes and Standards⁴**

IEEE P1547 Standard for Interconnecting Distributed Resources with Electric Power Systems as adopted and successor or related IEEE-approved standards.

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

⁴ When any listed version of these codes and standards is superseded by a revision approved by the standards-making organization, then the revision will be applied under Section II. Grandfathering for the codes will allow six months for manufacturers to adopt the new or revised standards unless an immediate threat to safety and reliability exists, that requires the retrofit of all similarly situated equipment.

Appendix C

Certification of Small Distributed Resource Equipment Packages

A Small Resource equipment package shall be considered certified for interconnected operation to an electric power distribution system if it has been approved under the certification process described below.

a. Certification process

An equipment package shall be considered certified for interconnected operation if it has been submitted, tested and listed by a nationally recognized testing and certification laboratory used by the State regulatory authority or approved by the U.S. Department of Energy for continuous utility interactive operation in compliance with the applicable codes and standards listed in Appendix B, above.⁵ An “equipment package” shall include all interface components including switchgear, inverters, or other interface devices and may include an integrated Small Resource. If the equipment package has been tested and listed as an integrated package which includes a Small Resource, it shall not require further design review, testing or additional equipment to meet the certification requirements. If the equipment package includes only the interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must demonstrate that the Small Resource being utilized with the equipment package is compatible with the equipment package and consistent with the testing and listing specified for the package. Provided the Small Resource combined with the equipment package is consistent with the testing and listing performed by the nationally recognized testing and certification laboratory, no further design review, testing or additional equipment shall be required to meet the certification requirements. A certified equipment package does not include equipment provided by the utility, nor does certification necessarily exempt an equipment package or Small Resource from Commissioning Testing required for installation and operation.

⁵ Editor’s Note: The Underwriters Laboratory lists UL-approved small distributed resource equipment and posts these listings on their website, including equipment approved by State regulators in States like New York and California. UL will also “de-list” any equipment that cannot continue to perform as specified by the listing.

APPLICATION FORMS:

- **Attachment 1** - “Short Form Application for Single Phase Attachment of Parallel Generation Equipment 20 kV or Smaller to the Electric System”
- **Attachment 2** - “Standard Application for Attachment of Parallel Generation Equipment to the Electric System” [for single phase equipment larger than 20 kV or for three-phase equipment of any size]

Attachment 1

**“SHORT FORM” APPLICATION FOR SINGLE PHASE ATTACHMENT OF
PARALLEL GENERATION EQUIPMENT 20 kV OR SMALLER TO THE
ELECTRIC SYSTEM OF**

Interconnection Provider: _____

Interconnection Provider’s Designated Contact Person: _____

Interconnection Provider’s Address: _____

Interconnection Provider’s Fax Number: (____)_____

Interconnection Provider’s E-Mail Address: _____

An application is a Complete Application when it provides all applicable and correct information required below. (Additional information to evaluate a request for Interconnection may be required pursuant to the application process after the application is deemed complete.)

Processing Fee:

The Interconnection Provider may require a cost-based Processing Fee, approved by the State Commission, to be paid at the time of application.

Applicant Information:

Legal Name of the Interconnecting Applicant:

Name: _____ Phone: (____)_____

Address: _____ Municipality: _____

Applicant’s Electric Service Customer Account Number: _____

**Name and Address of the Applicant as it appears on the Applicant’s electric bill from the
Electric Company:**

Name: _____ Phone: (____)_____

Address: _____ Municipality: _____

B. Consulting Engineer or Contractor:

Name: _____ Phone: (____)_____

Address: _____

Estimated In-Service Date: _____

Existing Electric Service:

Capacity: _____ Amperes Voltage: _____ Volts
Service Character: ()Single Phase ()Three Phase

Location of Protective Interface Equipment on Property:

(Include address if different from customer address)

Energy Producing Equipment/Inverter Information:

Manufacturer: _____
Model No. _____ Version No. _____
()Synchronous ()Induction ()Inverter ()Other _____
Rating: _____ kW Rating: _____ kVA
Interconnection Voltage: _____ Volts
DG System Type Tested (Total System): ()Yes ()No; attach product literature
Equipment Type Tested (i.e. Inverter, Protection System):
()Yes ()No; attach product literature
One Line Diagram attached: ()Yes
Installation Test Plan attached: ()Yes

Signature:

CUSTOMER SIGNATURE:

TITLE:

DATE:

Attachment 2**STANDARIZED APPLICATION FOR ATTACHMENT OF PARALLEL
GENERATION EQUIPMENT TO THE ELECTRIC SYSTEM OF****(Interconnection Provider)**
_____**Preamble and Instructions**

An owner of a small distributed generator resource who requests interconnection to a State-regulated distribution or transmission facility, must submit an application by hand delivery, mail, e-mail or fax to the Interconnection Provider, as applicable as follows:

Interconnection Provider: _____

Interconnection Provider's Designated Contact Person: _____

Interconnection Provider's Address: _____

Interconnection Provider's Fax Number: _____

Interconnection Provider's E-Mail Address: _____

An application is a Complete Application when it provides all applicable and correct information required below. (Additional information to evaluate a request for Interconnection may be required pursuant to the application process after the application is deemed complete.)

Processing Fee:

The Interconnection Provider may require a cost-based Processing Fee, approved by the State Commission, to be paid at the time of application. The fee may vary, depending on the size and characteristics of the small resource generator (e.g., a single phase generator vs. a three phase generator).

Section 1. Applicant Information

A. Legal Name of Interconnecting Applicant (or, if an Individual, Individual's Name)

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Facility Location (if different from above): _____

Telephone (Daytime): Area Code _____ Number _____ (Evening) Area Code _____
Number _____

Facsimile Number: _____

E-Mail Address: _____

B. Alternative Contact Information (if different from Applicant)

Contact Name: _____

Contact Title: _____

Address: _____

Phone Number: _____

Facsimile Number: _____

E-mail address: _____

C. Will the small resource be used for any of the following:

Net Metering? Yes ___ No ___ To supply power to the Interconnection Customer? Yes ___ No ___

To supply power to others? Yes ___ No ___

D. For generators installed at locations with existing electric service to which the proposed generator will interconnect, provide:

_____ (Local Electric Service Provider*)

_____ (Existing Account Number*)

[*To be provided by Applicant if Local Electric Service Provider is different from Interconnection Provider]

Contact Name: _____

Contact Title: _____

Address: _____

Phone Number: _____

Facsimile Number (if known): _____

E-mail address (if known): _____

E. Requested Point of Interconnection: _____

F. Interconnection Applicant's requested in-service date: _____

Section 2. Generator Qualifications

All data collected in Sections 2, 3, and 4 are applicable only to the generator facility, NOT the necessary interconnection facilities

Energy source: ___ Solar ___ Wind ___ Hydro ___ Hydro ___ Type (e.g. Run-of-River) _____ Diesel ___ Natural Gas ___ Fuel Oil Other (state type) _____

Type of Generator: ___ Synchronous ___ Induction ___ DC Generator or Solar with Inverter

Generator Nameplate Rating: _____ kW (Typical)
Generator Nameplate KVAR: _____

Applicant or Customer-Site Load: _____ kW (if none so state) (Typical);
_____ (Reactive Load, if known)

Maximum Physical Export Capability Requested: _____ kW

List components of the Generating Facility that are currently certified by a U.S. Department of Energy-approved laboratory and/or listed by the Underwriters Laboratory:

Equipment Type (Identify)	UL Listing or U.S. Lab Certification
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Section 3. Generator Technical Information

Generator (or solar collector) Manufacturer, Model Name & Number: _____

Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____

Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor

Rated Power Factor Leading: _____

Rated Power Factor Lagging: _____

Total Number of Generators in Wind Farm to be interconnected pursuant to this application:

_____ Elevation: _____ Single phase _____ Three phase

Inverter Manufacturer, Model Name & Number (if used): _____

List of Adjustable Set points the protective equipment or software: _____

Generator Characteristic Data (for rotating machines):

[Note: For Wind Generators, a completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the application.]

For Synchronous and Induction Generators:

Direct Axis Transient Reactance, X'd: _____ P.U.

Direct Axis Unsaturated Transient Reactance, X'di: _____ P.U.

Direct Axis Subtransient Reactance, X''d: _____ P.U.

Generator Saturation Constant (1.0): _____

Generation Saturation Constant (1.2): _____

Negative Sequence Reactance: _____ P.U.

Zero Sequence Reactance: _____ P.U.

KVA Base: _____

RPM Frequency: _____

Additional information for Induction Generators:

*Field Volts _____
 *Field Amperes _____
 *Motoring Power (kW) _____
 *Neutral Grounding Resistor (If Applicable) _____
 *I22t or K (Heating Time Constant) _____
 *Rotor Resistance _____
 *Stator Resistance *Stator Reactance _____
 *Rotor Reactance *Magnetizing Reactance _____
 *Short Circuit Reactance _____
 *Exciting Current _____
 *Temperature Rise _____
 *Frame Size *Design Letter _____
 *Reactive Power Required In Vars (No Load) _____
 *Reactive Power Required In Vars (Full Load) _____
 *Total Rotating Inertia, H: _____ Per Unit on kVA Base

[*Note: Please contact Interconnection Provider prior to submitting the Application, to determine if the specified information above is required.]

Excitation & Governor System Data for Synchronous Generators only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies.

A copy of the manufacturer's block diagram may not be substituted.

Section 4. Interconnection Equipment Technical Data Information

Will a transformer be used between the generator and the point of interconnection? ___ Yes
___ No

Will the transformer be provided by Interconnection Applicant? ___ Yes ___ No

Transformer Data (if applicable. for Interconnection Applicant-Owned Transformer):

Is the transformer: ___ single phase ___ three phase?

Size: _____ kVA

Transformer Impedance: _____ % on _____ kVA Base

If Three Phase:

Transformer Primary: _____ Volts ___ Delta ___ Wye ___ Wye Grounded

Transformer Secondary: _____ Volts ___ Delta ___ Wye ___ Wye Grounded

Transformer Fuse Data (if applicable, for Interconnection Applicant-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____ Load Rating: _____ Interrupting Rating: _____ Trip Speed: _____
(Amps) (Amps)
(Cycles)

Interconnection Protective Relays (if applicable):

(Enclose copy of any proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Current Transformer Data (if applicable):

(Enclose copy of Manufacturer's Excitation & Ratio Correction Curves)

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Potential Transformer Data (if applicable):

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Section 5. General Technical Information

Enclose copy of site electrical One-Line Diagram showing the configuration of all generating facility equipment, current and potential circuits, and protection and control schemes.

Is One-Line Diagram Enclosed? _____ Yes

[Note: This one-line diagram must be signed and stamped by a licensed Professional Engineer if the generating facility is larger than 50 kW.]

Enclose copy of any site documentation that indicates the precise physical location of the proposed generating facility (e.g., USGS topographic map or other diagram or documentation).

Proposed Location of Protective Interface Equipment on Property:
(Include Address if Different from Application Address) _____

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Any Available Documentation Enclosed? _____ Yes

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).

Are Schematic Drawings Enclosed? _____ Yes

Section 6. Applicant Signature

I hereby certify that, to the best of my knowledge, all the information provided in the Interconnection Application is true and correct.

Signature of Applicant: _____

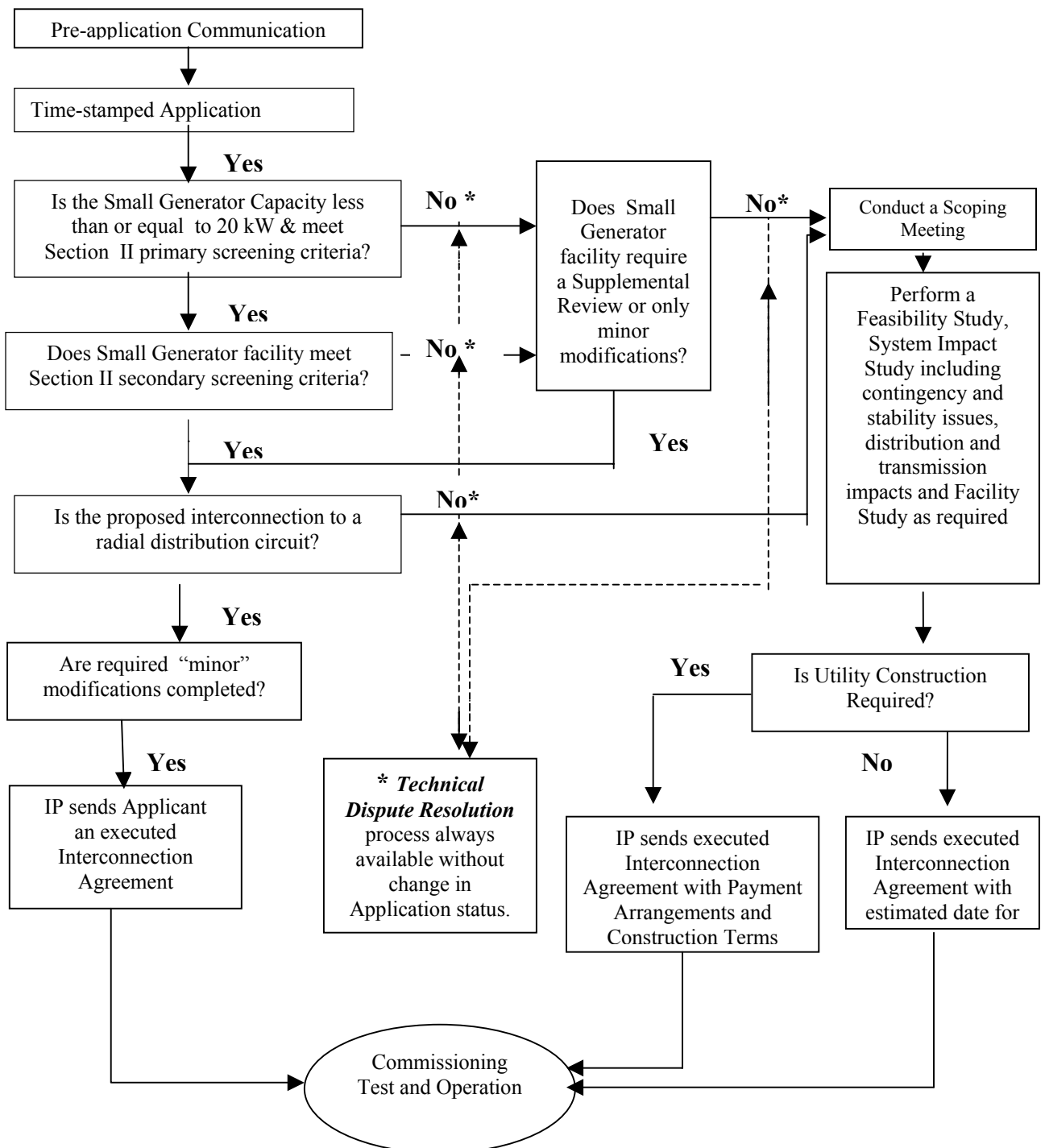
Date: _____

Figure

INTERCONNECTION PROCEDURES FOR SMALL RESOURCES

Super-Expedited Process:

Study Process:



**MODEL AGREEMENT FOR INTERCONNECTION
AND PARALLEL OPERATION OF
SMALL DISTRIBUTED GENERATION RESOURCES**

AGREEMENT FOR INTERCONNECTION AND PARALLEL OPERATION OF SMALL DISTRIBUTED GENERATION RESOURCES

This Interconnection Agreement (“Agreement”) is made and entered into this _____ day of _____, 20__, by _____ (“Interconnection Provider”), and _____ (“Interconnection Customer”) each hereinafter sometimes referred to individually as “Party” or both referred to collectively as the “Parties”.

Interconnection Customer Information:

Name: _____

Address: _____

Telephone: _____

Interconnection Customer Application No. _____

Interconnection Provider Information:

Name: _____

Address: _____

Telephone: _____

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1.0 Scope and Purpose of Agreement:

This Agreement describes *only* the conditions under which the Interconnection Provider and the Interconnection Customer agree that the distributed generating facility or facilities (“Small Resource”) described in Exhibit A may be interconnected to and operated in parallel with the utility Interconnection Provider’s system. Other services that the Interconnection Customer may require from the Interconnection Provider will be covered under separate agreements. The technical terms used in this agreement are defined in Exhibit B.

The following exhibits are specifically incorporated into and made a part of this Agreement:

Exhibit A: Summary and Description of Interconnection

Exhibit B: Technical Definitions

2.0 Summary and Description of Interconnection Customer’s Small Resource Equipment/Facility to be Included in Exhibit A:

A description of the Generating Facility, including a summary of its significant components and a diagram showing the general arrangement of Interconnection Customer's Small Resource and loads that are interconnected with Interconnection Provider's electric distribution system, is attached to and made a part of this Agreement as Exhibit A.

2.1 Interconnection Customer Application identification number: _____
(Assigned by the Interconnection Provider)

2.2 Interconnection Provider's Interconnection Customer electric service account number: _____ (assigned by Interconnection Provider)

2.3 Interconnection Customer's name and address as it appears on the Interconnection Customer's electric service bill from the Interconnection Provider:

2.4 Capacity of the Small Resource is: _____ kW.

2.5 The expected annual energy production of the Small Resource is _____ kWh.

2.6 For the purpose of identifying eligibility of the Interconnection Customer's Small Resource for consideration under the federal Public Utility Regulatory Practices Act of 1978 ("PURPA"), and amendments, the Interconnection Customer hereby declares that the Small Resource _ does/ _ does not meet the requirements for "Cogeneration" as such term is used under applicable State rules or laws.

2.7 The expected date of Initial Operation of the Small resource is _____.
The expected date of Initial Operation shall be within two years of the date of this Agreement.

3.0 Responsibilities of Distribution Interconnection Provider and Interconnection Service Interconnection Customer

Each Party will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities which it now or hereafter may own or lease unless otherwise specified in Exhibit A. Maintenance of Interconnection Customer's Small Resource and interconnection facilities shall be performed in accordance with the applicable manufacturer's recommended maintenance schedule.

The Parties agree to cause their facilities or systems to be constructed in accordance with specifications provided by the National Electrical Safety Code, the National Electric Code, and as approved by the American National Standards Institute, and interconnected in accordance with Institute of Electrical and Electronics Engineers standards where applicable.

Interconnection Provider and Interconnection Customer shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point Of Common Coupling. The Interconnection Provider or the Interconnection Customer, as appropriate, shall provide interconnection facilities that adequately protect the Interconnection Provider's distribution system, personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of the interconnection Facilities shall be made part of this agreement as Exhibit C.

4.0 Prior Authorization

For the mutual protection of the Interconnection Customer and the Interconnection Provider, the connections between the Interconnection Provider's service wires and the Interconnection Customer's service entrance conductors shall not be energized without prior authorization of the Interconnection Provider, which authorization shall not be unreasonably withheld.

5.0 Warranty Is Neither Expressed Nor Implied

Neither by inspection, if any, or non-rejection, nor in any other way, does the Interconnection Provider give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Interconnection Customer or leased by the Interconnection Customer from third parties, including without limitation the Small Resource and any structures, equipment, wires, appliances or devices appurtenant thereto.

6.0 Liability Provisions:

6.1 Limitation of Liability

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever.

6.2 Indemnification

a. Notwithstanding Paragraph 6.1 of this Agreement, the Interconnection Provider shall assume all liability for and shall indemnify the Interconnection Customer for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the Interconnection Provider's negligence in connection with the design, construction, or operation of its facilities as described on Exhibit A; provided, however, that the Interconnection Provider shall have no obligation to indemnify the Interconnection Customer for claims brought by claimants who cannot recover directly from the Interconnection Provider. Such indemnity shall include, but is not limited to, financial responsibility for

- (i) the Interconnection Customer's monetary losses;
- (ii) reasonable costs and expenses of defending an action or claim made by a third person;
- (iii) damages related to the death or injury of a third person;

- (iv) damages to the property of the Interconnection Customer;
- (v) damages to the property of a third person;
- (vi) damages for the disruption of the business of a third person.

In no event shall the Interconnection Provider be liable for consequential, special, incidental or punitive damages, including, without limitation, loss of profits, loss of revenue, or loss of production.

The Interconnection Provider does not assume liability for any costs for damages arising from the disruption of the business of the Interconnection Customer or for the Interconnection Customer's costs and expenses of prosecuting or defending an action or claim against the Interconnection Provider. This paragraph does not create a liability on the part of the Interconnection Provider to the Interconnection Customer or a third person, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph, do not apply in cases of gross negligence or intentional wrongdoing.

b. Notwithstanding Paragraph 6.1 of this Agreement, the Interconnection Customer shall assume all liability for and shall indemnify the Interconnection Provider for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the Interconnection Customer's negligence in connection with the design, construction, or operation of its facilities as described on Exhibit A; provided, however, that the Interconnection Customer shall have no obligation to indemnify the Interconnection Provider for claims brought by claimants who cannot recover directly from the Interconnection Customer. Such indemnity shall include, but is not limited to, financial responsibility for:

- (i) the Interconnection Provider's monetary losses;
- (ii) reasonable costs and expenses of defending an action or claim made by a third person;
- (iii) damages related to the death or injury of a third person;
- (iv) damages to the property of the Interconnection Provider;
- (v) damages to the property of a third person;
- (vi) damages for the disruption of the business of a third person.

In no event shall the Interconnection Customer be liable for consequential, special, incidental or punitive damages including, without limitation, loss of profits, loss of revenue, or loss of production. The Interconnection Customer does not assume liability for any costs for damages arising from the disruption of the business of the Interconnection Provider or for the Interconnection Provider's costs and expenses of

prosecuting or defending an action or claim against the Interconnection Customer. This paragraph does not create a liability on the part of the Interconnection Customer to the Interconnection Provider or a third person, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph does not apply in cases of gross negligence or intentional wrongdoing.

6.3 Force Majeure

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 of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

7.0 Insurance

The Interconnection Customer is not required to provide general liability insurance coverage as part of this Agreement, or any other Interconnection Provider requirement. Due to the risk of incurring damages, the State regulatory commission may recommend that every Interconnection Customer protect itself with insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities pursuant to this Agreement. At no time shall the Interconnection Provider require that the Interconnection Customer negotiate any policy or renewal of any policy covering any liability through a particular insurance Interconnection Provider, agent, solicitor, or broker.

8.0 Effect

The inability of the Interconnection Provider to require the Interconnection Customer to provide general liability insurance coverage for operation of the Small Resource is not a waiver of any rights the Interconnection Provider may have to pursue remedies at law against the Interconnection Customer to recover damages.

9.0 Severability

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

10.0 Notices

Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the person specified below:

If to Interconnection Customer:

Interconnection Customer Name
 Attention: _____
 Address: _____
 City: _____, State: ____
 Zip Code: _____
 Phone: () _____
 FAX: () _____

If to Interconnection Provider:

Interconnection Provider Name
 Attention: _____
 Address: _____
 City: _____, State: ____
 Zip Code: _____
 Phone: () _____
 FAX: () _____

10.1 Notices

A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 10.0.

10.2 Communications

The Parties may also designate operating representatives to conduct the daily communications which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other in accordance with Section 10.0.

11.0 Right of Access, Equipment Installation, Removal and Inspection

Upon reasonable notice, the Interconnection Provider may send a qualified person to the premises of the Interconnection Customer at or immediately before the time the Small Resource first produces energy to inspect the interconnection, and observe the commissioning of the Small Resource (including any required testing), startup, and operation for a period of up to no more than three days after initial start-up of the unit. In

addition, the Interconnection Customer shall notify the Interconnection Provider at least seven days prior to conducting any on-site Verification Testing of the Small Resource.

Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, Interconnection Provider shall have access to Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its Interconnection Customers.

12.0 Disconnection of Unit

Interconnection Customer retains the option to temporarily disconnect from Interconnection Provider's Interconnection Provider system at any time. Such temporary disconnection shall not be a termination of the Agreement unless Interconnection Customer exercises its termination rights under Section 13.0.

Subject to any State regulatory authority rule for routine maintenance and repairs on Interconnection Provider's system, the Interconnection Provider shall provide the Interconnection Customer with seven days' notice of service interruption. The Interconnection Provider shall have the right to disconnect service to Interconnection Customer without notice to eliminate conditions that constitute a potential hazard to Interconnection Provider personnel or the general public. The Interconnection Provider shall notify the Interconnection Customer of the emergency as soon as circumstances permit.

The Interconnection Provider may disconnect the Small Resource, after notice to the Interconnection Customer has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if the Small Resource adversely affects the quality of service of adjoining Interconnection Customers.

If, after the Small Resource has been commissioned, the operations of the Interconnection Provider are adversely affecting the performance of the Small Resource or the Interconnection Customer's premises, the Interconnection Provider shall immediately take appropriate action to eliminate the adverse effect. If the Interconnection Provider determines that it needs to upgrade or reconfigure its system the Interconnection Customer will not be responsible for the cost of new or additional equipment on the Interconnection Provider's side of the Point Of Common Coupling between the Interconnection Customer and the Interconnection Provider.

13.0 Effective Term and Termination Rights

This Agreement becomes effective when executed by both parties and shall continue

(a) Interconnection Customer may terminate this Agreement at any time, by giving the Interconnection Provider sixty days' written notice;

(b) Interconnection Provider may terminate upon failure by the Interconnection Customer to generate energy from the Facility in parallel with the Interconnection Provider's system by the later of two years from the date of this agreement or twelve months after completion of the interconnection;

(c) either party may terminate by giving the other party at least sixty days prior written notice that the other Party is in default of any of the material terms and conditions of the Agreement, so long as the notice specifies the basis for termination and there is reasonable opportunity to cure the default; or

(d) Interconnection Provider may terminate by giving Interconnection Customer at least sixty days notice in the event that there is a material change in an applicable rule or statute concerning interconnection and parallel operation of the Small Resource, unless the Interconnection Customer's installation is exempted from the change or the Interconnection Customer complies with the change in a timely manner. Nothing in this provision shall limit the ability of the Interconnection Provider to disconnect the Interconnection Customer without providing notice as specified herein if necessary to address a hazardous condition.

Upon termination of this Agreement, the Small Resource will be disconnected from the Interconnection Provider's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

14.0 Governing [Law/Regulatory Authority]

This Agreement was executed in the State of [name of State] and must in all respects be governed by, interpreted, construed, and enforced in accordance with the laws thereof. This Agreement is subject to, and the parties' obligations hereunder include, maintaining and operating in full compliance with all valid, applicable federal, State, and local laws or ordinances, and all applicable rules, regulations, orders of, and tariffs approved by, duly constituted regulatory authorities having jurisdiction.

15.0 Assignments:

15.1 Assignment to Corporate Party

At any time during the term, the Interconnection Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Interconnection Customer obtains the consent of the Interconnection Provider. Such consent will not be withheld unless the Interconnection Provider can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Interconnection Customer under this Agreement.

15.2 Assignment to Individuals

At any time during the term, an Interconnection Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Small Resource.

16.0 Confidentiality

[Provisions to be worked out between the Parties consistent with State law, regulatory rules and procedures for protecting critical infrastructure data, proprietary information or trade secrets.]

17.0 Dispute Resolution

Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner, consistent with applicable State regulatory commission rules regarding resolution of disputes.

18.0 Amendment and Notification

This Agreement can only be amended or modified by a writing signed by both Parties.

19.0 Entire Agreement

This Agreement constitutes the entire Agreement between the Parties and supersedes all prior agreements or understandings, whether verbal or written. It is expressly acknowledge that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement.

20.0 Non-Waiver

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. 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 on the Parties.

21.0 No Third Party Beneficiaries

This agreement is not intended to and does not create rights, remedies, benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of Parties, their successors in the interest and, where permitted, their assigns.

22.0 Signatures

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

[Interconnection Provider Name]

By: _____

Title: _____

Date: _____

[Interconnection Customer Name]

By: _____

Title: _____

Date: _____

Definitions for Terminology Used in the Agreement

- **Agreement** – means this Interconnection and Parallel Operation Agreement for Small Distributed Generation Resources by and between the Interconnection Provider and the Interconnection Customer.
- **Applicable Laws and Regulations** – means all duly promulgated applicable federal, State and local laws regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits, and other duly authorized actions of any Governmental Authority.
- **Interconnection Provider** - An electric Interconnection Provider operating a distribution system, as ascribed to in the first paragraph of this Agreement, and its agents or permitted successors and assigns.
- **Interconnection Customer** – Any entity interconnected to the Utility Interconnection Provider system for the purpose of receiving [or exporting] electric power from [or to] the Interconnection Provider system as ascribed to in the first paragraph of this Agreement, and its agents or permitted successors and assigns.
- **Party or Parties** – means either the Interconnection Provider or the Interconnection Customer or both.
- **Small Resource** – An electrical generating installation consisting of one or more on-site generating units. The total capacity of the aggregated generating units to be interconnected at any Point of Common Coupling under this Agreement shall not exceed the amount referenced in the Interconnection Customer’s Application Form, as modified by written consent of both the Interconnection Provider and the Interconnection Customer..
- **Force Majeure Event** - For purposes of this Agreement, a "Force Majeure Event" means 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 they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage.
- **Indemnification** – Protection against or being kept free from loss or damage.
- **Interconnection** – The physical connection of Small Resource to the Interconnection Provider system in accordance with the requirements of this Agreement so that parallel operation can occur.

- **Interconnection Agreement (“Agreement”)** – The standard form of agreement, which has been approved by the [State Regulatory Commission]. The Agreement sets forth the contractual conditions under which the Interconnection Provider and the Interconnection Customer agree that Small Resource may be interconnected with the Interconnection Provider’s system.
- **Interconnection Provider System** – A Interconnection Provider’s distribution system to which the Interconnection Customer’s Small Resource equipment is interconnected.
- **On-site Generating Units (or Small Resource)** – For purposes of this Agreement, an electrical generating facility located on the Interconnection Customer’s premises, generally, on the Interconnection Customer’s side of the point of delivery, which may be connected in parallel operation with the Interconnection Provider’s system.
- **Standardized Application** – The standard application for interconnection and parallel operation with the Interconnection Provider system, as approved by the State regulatory authority.
- **Term** – means the duration of this Agreement as specified in provision 12.0 of the Agreement.

EXHIBIT B

**Allocation of Responsibility for the Design, Installation, Operation,
Maintenance and Ownership of the Interconnection Facilities**

[NOTE: There can be significant State policy issues involved in the allocation of responsibilities that may vary from State to State. Exhibit C will allow each State to adopt its policy preferences on these issues.]