

GAINESVILLE REGIONAL UTILITIES (GRU)
AGREEMENT FOR INTERCONNECTION AND PARALLEL OPERATION
OF DISTRIBUTED GENERATION RESOURCES (DGR)

This **Interconnection Agreement** (“**Agreement**”) is made and entered into this _____ day of _____, 20____, by and between _____ (hereinafter called the Owner/Operator) located at _____ in Gainesville, Florida and the City of Gainesville, a Florida municipal corporation doing business as Gainesville Regional Utilities (“GRU”). Owner/Operator’s Account pursuant to this Agreement is GRU Account Number _____.

This Agreement constitutes the approval of Owner/Operator’s facilities for interconnection with GRU’s electric distribution system and sets forth the conditions required for parallel operation of Owner/Operator’s distributed generation resource. This approval is required in order to provide interconnection of Owner/Operator’s facilities under conditions which will insure the safety of GRU’s customers and employees, as well as the reliability and integrity of its distribution system. For purposes of this Agreement, the term Distributed Generation Resource (“DGR”) shall be interchangeable with the term “Facility”. For purposes of this Agreement DGR is defined as a renewable generation system and any reference to the “distribution system”. For purposes of this Agreement, any reference to the “distribution system” will mean GRU’s electrical distribution system which GRU operates pursuant to its Charter, as authorized by Chapter 90-394, Laws of Florida, as amended.

1. SCOPE OF AGREEMENT

This Agreement defines the terms and conditions under which GRU and Owner/Operator agree to interconnect a specific DGR of _____ kW DC or less as more particularly described in Attachment A, attached hereto and made a part hereof by reference as if fully set forth herein, at the specific location as stated above and at a standard GRU primary or secondary voltage to the distribution system.

2. ESTABLISHMENT OF POINT OF INTERCONNECTION

- 2.1. The “Point of Interconnection” is defined as the point at which ownership of electric facilities and/or equipment transitions from GRU to Owner/Operator. GRU will evaluate the capability of the existing distribution system and make an initial determination of the feasibility of interconnecting the DGR. If the initial evaluation is inconclusive a system study may be required to determine the adequacy of the distribution system to interconnect a DGR. Owner/Operator is responsible for all costs for the system impact study and GRU will not approve interconnecting any DGR until the system impact study is completed. GRU reserves the right to disallow the interconnection of the DGR if in its sole discretion the DGR will adversely impact GRU’s distribution system.
- 2.2. Determination of the Point of Interconnection is at GRU’s sole discretion. GRU and Owner/Operator agree to interconnect the DGR at the Point of Interconnection in accordance with GRU’s rules, regulations, rates, and tariffs (the “Rules”) incorporated herein by reference. The interconnection equipment installed by Owner/Operator (“Interconnection Facilities”) shall be consistent with and pursuant to the Rules.

3. EQUIPMENT AND INSTALLATION STANDARDS

- 3.1. Owner/Operator must provide written documentation satisfactory to GRU that the design specifications of the DGR, associated inverter, all connecting wiring and disconnect means, control and protective circuits, meters and any other related equipment adhere to the prevailing versions of the following applicable standards in effect at the time of this Agreement:
 - 3.1.1. IEEE Standard 1547, entitled “Interconnecting Distributed Resources with Electric Power Systems”
 - 3.1.2. UL Standard 1741, entitled “Standard for Safety for Static Inverters and Charge Controllers

for use in Distributed Resources

- 3.1.3. UL Standard 1703 entitled "Standard for Safety: Flat Plate Photovoltaic Modules and Panels
- 3.1.4. IEEE Standard 1262-1995, entitled "Recommended Practice for Qualification of Photovoltaic Modules" or IEC Standard 61646
- 3.1.5. IEEE Standard 929 "Recommended Practice for Utility Interface of Photovoltaic (PV) Systems
- 3.1.6. National Electrical Code.
- 3.2. Owner/Operator agrees that the requirements of this Agreement shall be in effect prior to interconnection of any DGR equipment with the distribution system. It is the responsibility of Owner/Operator to ensure that this condition is satisfied. If a DGR system (or elements thereof) is found to be interconnected to the distribution system without a fully executed Agreement, GRU reserves the right to isolate, secure, and lock out of service the DGR system. If such efforts are not practical or effective, GRU may operate or configure its equipment as necessary to isolate the DGR system from the distribution system.
- 3.3. Owner/Operator agrees that the installer of the DGR will be a licensed Florida Solar Contractor or Florida Electrical Contractor.
- 3.4. Owner/Operator shall provide written certification that the installation of the DGR was permitted and inspected by all local building code officials having jurisdiction over the DGR installation. Owner/Operator shall also provide written certification that the equipment and installation have met all applicable mechanical and electrical code requirements and has been approved by local code officials for operation. Owner/Operator may meet this requirement by forwarding a copy of the final electrical permit and a copy of any necessary construction permit(s) to the GRU representative identified in Section 13 so that it can be attached to this Agreement.
- 3.5. Review of Owner/Operator specifications by GRU shall not be construed as confirming or endorsing the design or any warranty of safety or durability of the DGR.
- 3.6. Owner/Operator shall provide all materials, labor and equipment necessary to deliver the output of the DGR to the Point of Interconnection. Pursuant to GRU's Energy Delivery Service Guide, Owner/Operator shall install, at Owner/Operator's sole expense, within ten (10) feet and within sight of the GRU revenue meter, a dedicated DGR disconnect switch. This device shall be manually operated, lockable, and of the visible load break type to isolate the output of the DGR and any Owner/Operator wiring connected to GRU's distribution system. Owner/Operator shall also be responsible for any and all costs to be incurred by GRU to establish the Point of Interconnection as set forth in Section Two of Attachment A. Payment is required by Owner/Operator prior to execution of such work by GRU. Upon Completion of the DGR project Owner/Operator shall be responsible for any additional distribution system modification cost, if required, to deliver the output of the DGR to the Point of Interconnection not accounted for initially. An additional invoice will be generated and must be paid prior to final interconnection of the DGR. No Facility shall be allowed to deliver energy to GRU until the cost of interconnection is fully resolved. Any deviation from Owner/Operator interconnection requirements must be reviewed and approved in writing by GRU prior to construction.
 - 3.6.1. The manual disconnect means shall be mounted on the same wall as the revenue meter, but shall be separate from the revenue meter socket, readily accessible to GRU personnel, and capable of being locked in the open position with a GRU padlock.

- 3.6.2. The disconnect means must be clearly labeled “**Auxiliary Generation Disconnect**” and be readily visible to GRU personnel. The label shall be permanently riveted to the disconnect device, and shall be red, weatherproof, hard plastic with engraved white block lettering. (see Exhibit 1)¹
- 3.7. The disconnect means shall have an interrupting rating sufficient for the nominal circuit voltage and the current that is available at the line terminals of this equipment.
- 3.8. GRU shall have the right to open the disconnect means isolating the DGR without prior notice to Owner/Operator. To the extent practicable, GRU will make reasonable attempts to provide prior notice to Owner/Operator but assumes no liability if such notice is not given. GRU shall make reasonable efforts to reconnect the DGR to the distribution system as soon as practical following resolution of the issue that required the disconnection. Owner/Operator should take an active interest in ensuring that the DGR is reconnected within a reasonable period of time.
- 3.9. In the event the DGR manual disconnect switch is opened or the DGR is otherwise isolated from the distribution system for any reason and for any expanse of time, Owner/Operator shall not be due any compensation associated with the inability to deliver energy to his/her load or to the distribution system.
- 3.10. When the size of the DGR system precludes the use of Owner/Operator’s service entrance equipment as the connection point, an alternate disconnect means must be designed and provided by Owner/Operator and approved by GRU before installation.
- 3.11. On both the REC and GRU revenue meter socket covers the labeling shall state “**Warning: Electric Shock Hazard. The terminals on both line and load side may be energized in the open position**” and be readily visible to GRU personnel. The labels shall be permanently riveted to the covers, and shall be made of red, weatherproof, hard plastic with engraved white block lettering. (see Exhibit 2)²

4. OWNER/OPERATOR INSURANCE REQUIREMENTS

- 4.1. Owner/Operator of a Tier 1 system shall maintain general liability insurance for personal injury and property damage in an amount of not less than \$100,000. For government entities, the policy coverage shall not exceed the entity’s maximum liability established by law and proof of self-insurance consistent with law shall satisfy this requirement.
- 4.2. Owner/Operator of a Tier 2 system shall maintain in full force and effect, general liability insurance for personal injury and property damage of at least \$300,000. For government entities, the policy coverage shall not exceed the entity’s maximum liability established by law and proof of self-insurance consistent with law shall satisfy this requirement.
- 4.3. Owner/Operator of a Tier 3 system shall maintain in full force and effect, general liability insurance for personal injury and property damage of at least \$1,000,000. For government entities, the policy coverage shall not exceed the entity’s maximum liability established by law and proof of self-insurance consistent with law shall satisfy this requirement.
- 4.4. Owner/Operator shall provide a copy of their insurance policy or Certificate of Insurance to GRU. These documents shall become a part of this agreement.
- 4.5. In the event that Owner/Operator fails to maintain the insurance coverage required by this Agreement, GRU has the right to immediately terminate this Agreement, immediately terminate the

¹ GRU Energy Delivery Service Guide

² GRU Energy Delivery Service Guide

DGR interconnection and require Owner/Operator to permanently disconnect the DGR from the distribution system.

5. LEASE AGREEMENTS

- 5.1. The Owner/Operator shall provide GRU a copy of the lease agreement, as applicable, for any and all leased interconnection equipment.
- 5.2. The Owner/Operator shall not enter into any lease agreement that results in the retail sale of electricity. Notwithstanding this restriction, in the event the Owner/Operator so enters such an agreement, the Owner/Operator may become subject to the Florida Public Service Commission's jurisdiction and may be subject to various fines and penalties.

6. METERING REQUIREMENTS

- 6.1. GRU shall solely determine the equipment required to properly and accurately meter the DGR Installation.
- 6.2. Should the nameplate rating of the DGR be 250 kilowatts DC or greater, telemetry and metering equipment shall be installed to provide GRU with DGR monitoring and performance data. The required telemetry and metering equipment shall be installed by GRU at Owner/Operator's expense. Owner/Operator shall also be responsible for the recurring communication costs and maintenance costs of the telemetry equipment. If Owner/Operator so chooses, he shall be solely responsible for supplying the communications link between the telemetry equipment and Owner/Operator's systems for monitoring the operation and performance of the DGR. Should the nameplate rating of the DGR be less than 250 kilowatts DC, the installation of telemetry by Owner/Operator is optional.
- 6.3. The meter socket and all other required metering equipment, if any, shall be provided by Owner/Operator and shall be approved by GRU in advance of installation.
- 6.4. For self-contained revenue metering applications, the meter socket shall have a clearly legible label reading "**Warning: electric shock hazard. Do not touch terminals. Terminals on both the line and load sides may be energized in the open position.**" The labels shall be made of hard plastic, permanent, weatherproof, colored red with engraved white block lettering and readily visible to GRU personnel. (see Exhibit 2)³
- 6.5. An appropriate electric meter(s) shall be provided by GRU at no cost to Owner/Operator, except as provided in Section 5.2 above.

7. INITIAL TESTING, STARTUP AND OPERATION

- 7.1. Initial testing, startup, and operation shall not commence until all construction required by GRU to establish the point of interconnection is completed and final payments are made, pursuant to Section 3.6 of this Agreement.
- 7.2. Upon execution of this Agreement, receipt of all required DGR documentation and fees, including the final building and electrical inspection by the local codes enforcement personnel and upon request by Owner/Operator, an authorized representative of GRU shall survey the DGR installation to ensure operational and interconnection requirement compliance. A successful audit and test may result in an immediate interconnection of the DGR.
- 7.3. In the event that GRU determines, in the exercise of its sole discretion as a result of the above mentioned survey, that the DGR is unacceptable for interconnection, GRU shall provide Owner/Operator written notice of the DGR deficiencies including but not limited to safety and/or

³ GRU Energy Delivery Service Guide

reliability risks. Such notice shall include a list of all noted DGR equipment or documentation issues that must be remedied. Owner/Operator shall be solely responsible for correcting all deficiencies and notifying GRU of readiness for another survey and possible interconnection. A failed DGR survey will prevent interconnection until all deficiencies have been remedied.

8. METERING AND COMPENSATION FOR EXCESS ELECTRIC ENERGY SUPPLIED TO THE GRU ELECTRICAL DISTRIBUTION SYSTEM BY OWNER/OPERATOR DGR

- 8.1. GRU shall solely determine the metering equipment required at Owner/Operator location to measure any excess generation produced by the DGR that is delivered into the distribution system if Owner/Operator desires. For the purposes of this Agreement, excess generation is defined as any kWh of electrical energy produced by the DGR which is not consumed by Owner/Operator's electrical requirements and is delivered to the distribution system. The cost of metering equipment, installation, and maintenance, shall be borne by GRU.
- 8.2. Owner/Operator shall receive a monthly energy credit for all excess kilowatt-hours delivered into the distribution system. If the energy credit exceeds the total electric energy billed amount in any corresponding month, the excess energy credit shall be applied to the subsequent month's billing. An annual true up with conversion to money will be applied at the end of each calendar year using an avoided cost price. GRU reserves the right to develop the annual avoided cost pricing and/or modify its tariff at any time without prior notice to Owner/Operator.
- 8.3. In the event that GRU opens the DGR manual disconnect means for any reason for any time period, Owner/Operator agrees that GRU shall have no liability for and shall not pay Owner/Operator for any actual or potential generation that may or could have occurred while the DGR was disconnected from the distribution system.

9. GRU'S RIGHTS TO DISCONNECT THE DGR FOR CAUSE

- 9.1. GRU shall have the right to disconnect Owner/Operator's DGR without notice if GRU, determines any of the following conditions have occurred, or are occurring:
 - 9.1.1. Adverse electrical effects (such as power quality problems) imposed upon the distribution system and/or the electrical equipment of GRU's electrical customers attributed to the DGR as determined by GRU.
 - 9.1.2. Utility system emergencies or maintenance requirements.
 - 9.1.3. Hazardous conditions existing on the utility system due to the operation of Owner/Operator's DGR generating or protective equipment.
 - 9.1.4. Failure of Owner/Operator to comply with applicable federal, state or local law, regulation or rules relating to the operation of the DGR.
 - 9.1.5. GRU's identification of un-inspected or unapproved equipment, or modifications to the DGR after initial approval
 - 9.1.6. Recurring abnormal operation, substandard operation or inadequate maintenance of DGR.
- 9.2. In the event that GRU opens the manual disconnect means for routine meter maintenance, system emergencies, or any other operating consideration, other than events or conditions arising out of Owner/Operator's operation of the DGR, GRU shall make reasonable efforts to reconnect Owner/Operator's generation equipment. This Agreement shall not entitle Owner/Operator to any restoration priority over any other of GRU's customers.

10. DGR OPERATION AND MAINTENANCE REQUIREMENTS

- 10.1. Owner/Operator shall operate and maintain the DGR and all associated equipment in accordance with the manufacturer's requirements and all applicable state or local building codes.
- 10.2. Owner/Operator shall be solely responsible for protecting its generating equipment, inverters, protection devices, and other system components from damage from the normal and abnormal conditions and operations that may occur on the distribution system in delivering or restoring power including temporarily grounding of said system as required for safe work practices.
- 10.3. Owner/Operator shall promptly notify GRU if any modifications, repairs, or component replacements result in a change to the initial configuration, rating, and/or operation of the DGR. GRU shall have the right to audit the DGR prior to its reconnection to the distribution system.
- 10.4. GRU shall have the right to periodically audit the DGR installation to ensure compliance with operational and interconnection requirements.
- 10.5. If during this Agreement, the operation of the DGR adversely impacts the distribution system, Owner/Operator shall be responsible for any and all costs for GRU to remedy these impacts if possible including disconnection.

11. RENEWABLE ENERGY CREDITS

- 11.1. A Renewable Energy Credit (REC) represents the environmental attributes of one thousand kWh (1 MWh) of electricity produced by a renewable resource (i.e., solar). A REC is the commodity used by electric providers to account for their participation in renewal energy programs.
- 11.2. Owner/Operator retains all REC's generated by this DGR facility. The REC meter shall be owned and maintained by GRU for the purpose of providing operational data as needed by GRU.

12. OWNER/OPERATOR INDEMNIFICATION OF GRU FOR OPERATION OF DGR

Any fines or any such penalties incurred by Owner/Operator for noncompliance with any Laws, rules, regulations, codes, ordinances, etc. shall not be reimbursed by GRU but shall be the sole responsibility of Owner/Operator. Owner/Operator shall indemnify, hold harmless and defend the City of Gainesville, GRU, its elected officials and employees from and against any and all liability, proceedings, suits, cost or expense for loss, damage or injury to persons or property, including the Facility, in any manner directly or indirectly connected with, or growing out of the installation, operation or maintenance of Owner/Operator's Facility, except in those cases where loss occurs due solely to the negligent actions of GRU. If Owner/Operator is not a single legal entity, then all such entities comprising Owner/Operator shall be jointly and severally liable to for all representations, warranties, obligations, covenants, and liabilities under this Agreement and all other agreements.

13. TERMINATION OF AGREEMENT

- 13.1. In the event that Owner/Operator fails to maintain the insurance coverage required by this Agreement, GRU shall have the right to immediately terminate this Agreement.
- 13.2. GRU may perform periodic inspections and testing of the DGR at such intervals as it may deem proper. In the event that GRU, in the exercise of its sole discretion, determines that the DGR is performing in an abnormal or unsafe manner on a recurring basis, GRU shall have the right to immediately disconnect the DGR and shall provide written notice to Owner/Operator of the issue or deficiency. If after a reasonable time as determined by GRU the issue which caused the disconnection is not remedied to GRU's satisfaction, GRU will terminate this Agreement and provide written notification to Owner/Operator to that effect. Once this Agreement has been terminated, Owner/Operator will be required to submit a new Application and adhere to the then current process for DGR interconnection.

- 13.3. This Agreement is not transferable or assignable. In the event that the DGR located at the above location is sold, leased, or if ownership is transferred to another person or entity without GRU's prior written consent, this Agreement may be terminated.
- 13.4. Upon termination of this Agreement for any reason, GRU may padlock the manual disconnect means in the open position and may modify or remove any GRU installed metering equipment.
- 13.5. The rights described in this section are supplementary to any rights GRU may have in law or equity arising out of any violation of the terms of this Agreement.

14. POWER SALES THROUGH GRU

Interconnection of DGR facilities with GRU's distribution system does not grant Owner/Operator any right to export power to others nor does it constitute an agreement by GRU to wheel excess power.

15. OFFICIAL NOTIFICATION

For the purpose of making emergency or other communication relating to the operation of the DGR under the provisions of this Agreement, the parties designate the following for said notification:

For Owner/Operator: Name: _____
 Address: _____
 Phone: _____
 Email: _____

For Gainesville Regional Utilities:

Jim Gilmartin or his successor
 Engineer Utility Designer
 Gainesville Regional Utilities
 (352) 393-1493
 (352) 334-2731 (Fax)
gilmartinjj@gru.com

IN WITNESS WHEREOF, and intending to be legally bound hereby, Owner/Operator and GRU have caused this Agreement to be executed this _____ day of _____, 20_____.

 Owner/Operator: Individual's Name
 or Organization's Title

The City of Gainesville d/b/a GRU

By: _____
 Title: _____
 Date: _____

By: _____
 Gary Baysinger or designee
 Energy Delivery Officer
 Title: _____
 Date: _____

Approved as to Form and Legality:
 Keino Young , on February 8, 2018
 Utilities Attorney

Attachment A – Section 1

LIST OF FACILITIES SCHEDULES AND POINTS OF INTERCONNECTION

Facility Customer will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for its facilities, unless otherwise specified on this Attachment A. The following information is to be specified for each Point of Interconnection, if applicable.

SECTION ONE - Owner Information (to be supplied by applicant)

1. System Owner

Name: _____
Address: _____
City, State, ZIP _____
Phone: _____
Email: _____

2. System Installer/Contractor

Name: _____
Address: _____
City, State, ZIP _____
Phone: _____
Email: _____

3. Location of system

Storefront name (if applicable): _____
Address: _____
City, State, ZIP _____
Phone: _____
Email: _____

4. PV System Specifications

DC Power Rating (Watts) _____
Number of Phases: _____

Contractor must submit an Electrical One Line Diagram, Mounting Elevation drawing, a Location site plan (Tier 2 and 3 only) and a solar panel layout (Tier 2 and 3 only) that will be included with this document.

Customer must submit a copy of their Declaration page for their homeowner's insurance or a COI that will be included with this document.

Attachment A – Section 2

SECTION TWO – Interconnection Requirements (to be completed by GRU)

1. Engineering Review of PV System Information Provided By Owner/Operator

- a. Elevation Drawing with Metering Location _____
- b. One-line Diagram with Point of Interconnection & Metering Description _____
- c. Electric Panel schedule (on all installations) _____
- d. Verify Installation does not exceed PV Allocation Size _____
- e. Verify voltage rise concerns do not exist. If it does, take needed action
- f. Verify project does not exceed the PV Saturation Threshold for Circuit
- g. Developer confirmed by email that they reviewed Section 8 of the ED Service Guide and have abided by its contents in their design & drawings
- h. Solar Panel Layout
- i. Location Site Plan

2. Determination of Point of Interconnection

- a. Summary of required distribution system additions or modifications:
- b. Cost estimate of additions/modifications above: \$ _____
- c. GIS graphic depicting Point of Interconnection (see attached map)
- d. Point of Interconnection detail: (Indicate where on GRU system)
 - i. (Circle One) Underground or Overhead transformer no. NNNNN, NN kVA, VVV Voltage
 - ii. Approved by: _____ *GRU Engineer*
 - iii. Date Approval Completed: _____

3. Metering Requirements

- a. Voltage _____
- b. Meter installation description
- c. Communication protocol
- d. Summary of required metering infrastructure and costs:
 - i. Approved by: _____ *GRU METERING Engineer*
 - ii. Date Approval Completed: _____

4. Summary of Required Upgrades and Estimated Costs to Owner/Operator

5. ESTIMATED TOTAL COST \$ _____

6. Supplemental terms and conditions attached (check one): ___ Yes / ___ No

SIGNATURES INDICATING ENGINEERING/METERING APPROVAL ON THIS PAGE REQUIRED BEFORE INTERCONNECTION AGREEMENT CAN BE EXECUTED.