



GRICUA SOLAR DISTRIBUTION INTERCONNECTION AGREEMENT INVERTER BASED GENERATORS 50 kW OR LESS

PARTIES

This Solar Distribution Interconnection Agreement for Inverter Based Generators ("Agreement") is entered into by and between _____ ("Customer") and Gila River Indian Community Utility Authority (GRICUA), organized and existing pursuant to the laws of the Gila River Indian Community.

RECITALS

Customer has requested to interconnect its Customer-owned inverter based generation, 50 kW or less, ("Generating Facility") to GRICUA's electrical service grid at the metered location _____

Customer may elect to have a separate entity ("Third Party") design, install, own or operate the Generating Facility and satisfy some or all of the terms of this Agreement via separate agreement.

GRICUA requires that all customers operating Generating Facilities in parallel with GRICUA's electrical distribution system sign a Distribution Interconnection Agreement prior to interconnection. This Agreement governs the terms and conditions under which the Generating Facility will interconnect with, and operate in parallel with, the GRICUA Distribution System.

In consideration of the parties' mutual promises, undertakings, and agreements, the parties agree as follows:

AGREEMENT

1.0 Generating Facility Qualification.

- 1.1 Customer-owned inverter based generation shall have a Maximum power rating that:
 - a. Does not exceed 90% of the Customer's utility distribution service ratings; and
 - b. Is 50 kW or less.
- 1.2 Maximum power rating for the Customer-owned inverter based generation is _____kW (AC).

2.0 Effective Date and Termination. This Agreement shall become effective on the Effective Date (as defined below) upon execution by the parties.

- 2.1 Customer may request termination unless earlier terminated as provided herein:
 - a. This Agreement may be terminated by GRICUA after giving written notification to the Customer if GRICUA determines that the Generating Facility is out of compliance with the terms and conditions of this Agreement and the Customer fails to take any corrective action within ninety (90) days.
 - b. This Agreement may be terminated by the Customer after giving GRICUA thirty (30) days advance written notice that the Generating Facility will permanently cease operation.
 - c. Either party may terminate this Agreement for any uncured default, pursuant to Section 10.0 of this Agreement.

- 2.2 Upon termination of this Agreement, whether initiated by either GRICUA or Customer, the Generating Facility will be disconnected from the GRICUA Distribution System. All costs required to effectuate such disconnection shall be borne by the Customer, unless such termination resulted from GRICUA's default of this Agreement or GRICUA otherwise is responsible for these costs under this Agreement.
- 2.3 The termination of this Agreement shall not relieve either party of its liabilities or obligations, owed or continuing at the time of termination.

3.0 Customer's General Obligations. Customer, and not GRICUA, shall be responsible for the following at its own expense:

- 3.1 Customer shall submit the plans for design and installation of the Generating Facility to GRICUA for review of the compatibility of the Generating Facility with the operation, reliability, integrity and safety of GRICUA's electrical distribution system and personnel. The plans shall include and illustrate the following:
 - PLANS must include a three-line diagram of the PV module array.
 - PLANS must indicate the Inverter brand, model and operating characteristics.
 - PLANS must include the PV module brand and specification.
 - PLANS must have an overhead view of the facility (i.e. home) showing the location of the service entrance, utility meter, modules, PV meter, PV safety disconnect and PV (co-generation) system utility disconnect.
 - On roof top-mounted PV arrays, PLANS must show that ground-fault protection will be provided.
- 3.2 Customer shall be solely responsible for all legal and financial obligations arising from design, construction, installation, operation, and maintenance of the Generating Facility.
- 3.3 Customer must obtain all permits, inspections and approvals required by applicable jurisdictions with respect to the Generating Facility and must use a licensed, bonded and insured contractor to design and install the Generating Facility.
- 3.4 The Customer is responsible for complying with GRICUA's Rules and Regulations for Electric Service and Technical Interconnection Requirements attached hereto as Exhibit A and all other applicable technical standards, safety codes, Article 690 of the National Electric Code, equipment manufacturers' specifications related to the design, installation, operation and maintenance of the customer's entire electrical installation including the PV system, not specifically mentioned in this Agreement. These requirements are based on the IEEE Recommended Practice for Utility Interface of Residential and Intermediate Photovoltaic Systems (Standard 929, latest version).
- 3.5 The PV System and its Components must be Listed and Tested by a National Recognized Testing Laboratory (NRTL) to Underwriters Laboratory (UL) Standard 1741.
- 3.6 Customer shall operate and maintain the Generating Facility and all other Customer-owned equipment on the Customer's side of the Point of Interconnection in good repair and be solely responsible for protection of the Generating Facility from electrical events originating on either side of the Point of Interconnection.
- 3.7 Customer may elect to have a Third Party design, install, own or operate the Generating Facility. However, Customer shall still be responsible for ensuring that all its obligations under this Agreement are

fulfilled.

- 3.8 Generating Facilities utilizing battery systems shall have an automatic transfer switch. Review of these micro-grid systems may require additional fees for GRICUA review.

4.0 GRICUA General Obligations. GRICUA, and not the Customer, shall be responsible for the following at its own expense:

- 4.1 GRICUA shall witness testing of the Generating Facility and Customer's electrical system and confirm in writing that test results are satisfactory before Customer shall be permitted to operate the Generating Facility in parallel with GRICUA's electrical distribution system. GRICUA'S WITNESS TESTING AND REVIEW OF CUSTOMER'S PLANS, SPECIFICATIONS, DESIGNS, AND TEST RESULTS SHALL NOT BE CONSTRUED AS CONFIRMING OR ENDORSING THE DESIGN OF, OR AS ANY WARRANTY OF SAFETY, DURABILITY OR RELIABILITY OF, THE GENERATING FACILITY, CUSTOMER'S EQUIPMENT OR PROTECTIVE DEVICES, OR THE TECHNICAL OR ECONOMIC FEASIBILITY OF THE GENERATING FACILITY. THE SOLE PURPOSE OF GRICUA'S REVIEW IS TO EVALUATE WHETHER GRICUA'S ELECTRICAL DISTRIBUTION SYSTEM WILL BE ADVERSELY AFFECTED BY THE GENERATING FACILITY. CUSTOMER SHALL NOT COMMENCE PARALLEL OPERATION OF THE GENERATING FACILITY UNTIL CUSTOMER RECEIVES FINAL WRITTEN APPROVAL FROM GRICUA.
- 4.2 GRICUA shall pay for energy delivered to GRICUA in accordance with any applicable buyback service rider or applicable successor pricing document for which Customer may be eligible.

5.0 GRICUA Right of Access and Inspection of Documents and Generating Facility.

- 5.1 GRICUA reserves the right in its sole and absolute discretion to review all information, specifications, designs, and test results relating to the Generating Facility. GRICUA may require modifications to the Customer's specifications and designs based on current industry standards to enable GRICUA to operate its electrical distribution system as safely and reliably as possible.
- 5.2 Customer hereby grants GRICUA's employees and agents the right of access to the premises at all times for emergency operation or repair of GRICUA's equipment and related facilities, and at all other reasonable times for such purposes as installing, constructing, modifying, testing and maintaining GRICUA's equipment and related facilities. GRICUA reserves the right to inspect the Generating Facility at any time, in its sole and absolute discretion, upon reasonable notice (if practical) to Customer. If GRICUA has reason to believe that Customer may be operating in a manner unsafe or harmful to GRICUA's electrical distribution system, personnel or the general public, GRICUA may also request that Customer test the Generating Facility and provide GRICUA the results in writing irrespective of periodic testing of equipment that may be required or has been completed pursuant to Exhibit A.

6.0 GRICUA Right to Require Customer to Disconnect Generating Facility from GRICUA Electrical Distribution System.

- 6.1 GRICUA shall not be obligated to be interconnected with the Generating Facility nor to accept energy from Customer, and GRICUA, in its sole and absolute discretion, may require Customer to disconnect from the GRICUA electrical distribution system or interrupt or reduce deliveries of energy to GRICUA: (a) when necessary to investigate, inspect, construct, install, maintain, repair, replace or remove any GRICUA equipment, any part of GRICUA's electrical distribution system, or the Generating Facility; (b) because of emergencies, forced outages, uncontrollable forces or compliance with prudent electrical practice; or (c) when Customer is in breach of any of its obligations under this Agreement.
- 6.2 GRICUA shall notify the Generating Facility as soon as practicable if, based on Good Utility Practice, operation of the Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or to systems to which GRICUA is directly connected. Supporting documentation used to reach the decision to disconnect shall be provided to the Generating Facility upon request. If, after notice, the Generating Facility fails to remedy the adverse operating effect within a

reasonable time, GRICUA may disconnect the Generating Facility. GRICUA shall provide the Generating Facility with five Business Day notice of such disconnection, unless the provisions of paragraph 7.0 apply.

- 7.0 GRICUA Right to Disconnect Generating Facility from GRICUA Electrical Distribution System.** Notwithstanding any other provision of this Agreement, if GRICUA, in its sole and absolute discretion, determines that continued operation of the Generating Facility may (a) endanger GRICUA personnel or the general public or (b) impair the integrity of GRICUA's electrical distribution system, GRICUA may disconnect the Generating Facility from GRICUA's electrical distribution system without prior notice. In such event, the Generating Facility shall remain disconnected until GRICUA is satisfied that the preceding conditions (a) and/or (b) have/has been corrected. GRICUA shall have no obligation to compensate Customer for any loss of energy during any and all periods when the Generating Facility is operating at reduced capacity or is disconnected from the GRICUA electrical distribution system pursuant to this Agreement.
- 8.0 Liability and Damages.** To the fullest extent permitted by law, GRICUA, the members of its Board of Directors, its officers, consultants, agents and employees (collectively, the "Related Parties") shall not be liable to Customer, its successors, assigns, consultants or agents, or their respective insurers, for any incidental, indirect, consequential, punitive or other damages or special damages whatsoever, including, without limitation, lost profits, production losses, production delays, or any and all other indirect damages or losses, for performance or nonperformance of its obligations under this Agreement, even if GRICUA is advised of the possibility thereof, and irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Customer, GRICUA or others), strict liability, contracts, operation of law, or otherwise.
- 9.0 Customer Indemnification.** To the fullest extent permitted by law, Customer shall indemnify, defend and hold harmless GRICUA and its Related Parties for, from and against any and all claims, demands, suits, costs of defense, attorneys' fees, witness fees of any type, losses, damages, expenses, and liabilities, whether direct, indirect or consequential, related to, arising from, or in any way connected with: (a) Customer's or any non-GRICUA party's design, construction, installation, inspection, maintenance, testing or operation of the Generating Facility or equipment used in connection with this Agreement; (b) the interconnection of the Generating Facility with, and delivery of energy from the Generating Facility to, GRICUA's electrical distribution system; or (c) the performance or nonperformance of Customer's obligations under this Agreement. It is the intent of GRICUA and Customer that GRICUA shall, in all instances except for loss or damage resulting from the sole negligence of GRICUA, be indemnified against all liability, loss, or damage of any nature whatsoever for or on account of any injuries or death of person(s) or damages to or destruction of property belonging to any person arising out of, or in any way connected with, Customer's performance of this Agreement and the interconnection of the Generating Facility. Customer's obligations under this Section shall survive the termination of this Agreement.
- 10.0 General Terms and Conditions.** This Agreement shall be interpreted, governed by, and construed in accordance with the substantive and procedural laws of the Gila River Indian Community, without regard to conflicts of law principles. GRICUA and Customer agree that any action, suit, or proceeding arising out of or relating to this Agreement shall be initiated and prosecuted in the courts of the Gila River Indian Community, and the parties irrevocably submit to the venue of such courts. To the fullest extent permitted by law, each party hereby irrevocably waives any and all rights to a trial by jury and covenants and agrees that it will not request a trial by jury with respect to any legal proceeding arising out of or relating to this Agreement. None of the provisions of this Agreement shall be considered waived by either party except when such waiver is given in writing. No waiver by either party of any one or more defaults in the performance of the provisions of this Agreement shall operate or be construed as a waiver of any other existing or future default or defaults. If any one or more of the provisions of this Agreement or the applicability of any provision to a specific situation is held invalid or unenforceable, the provision shall be modified to the minimum extent necessary to make it or its application valid and enforceable, and the validity and enforceability of all other provisions of this Agreement and all other applications of such provisions shall not be affected by any such invalidity or unenforceability. Upon its Effective Date, this Agreement supersedes all prior agreements or commitments for interconnection and/or buyback service between the parties for the point of interconnection herein specified. This Agreement does not govern the terms and conditions for the delivery of power and energy to Customer from GRICUA's electrical distribution system or Customer's participation in the GRICUA Solar Electric Program. Nothing in this

Agreement shall be construed as an express or implied waiver of GRICUA's sovereign immunity.

Customer understands and agrees to all terms and conditions of this Agreement. The undersigned represents and warrants that he or she has the authority to sign this Agreement on behalf of Customer. This Agreement is dated and effective as of the last signing date below ("Effective Date").

Customer

Authorized Signature: _____

Printed Name: _____ Title: _____

Date: _____

GRICUA

Authorized Signature: _____

Printed Name: _____ Title: _____

Date: _____

Is SCIP approval required? Yes / No

SCIP

Authorized Signature: _____

Printed Name: _____ Title: _____

Date: _____

Exhibit A

TECHNICAL INTERCONNECTION REQUIREMENTS

GRICUA or Customer may from time to time require changes in Customer's connection, protective, or control equipment to meet changing conditions and requirements for the Generating Facility or GRICUA's electrical distribution system.

1.0 GENERAL OBLIGATIONS:

- 1.1 Customer shall ensure that the electrical characteristics of its load and generating equipment shall conform to GRICUA's normal power quality requirements. Customer shall ensure that any deviation from sine wave form or unusual interval fluctuations in power demand or production shall not result in impairment of electrical service to others. Power factor and quality issues are defined in GRICUA's Electric Service Specifications and its Rules and Regulations.
- 1.2 Customer shall design, own, operate and maintain the Generating Facility in good repair in accordance with manufacturer's guidelines and prudent electrical practices, and provide written evidence to GRICUA of such compliance upon request of GRICUA.
- 1.3 The Generating Facility at this installation must be off line before the GRICUA electric service is restored (reclosed) following a trip of the GRICUA feeder breaker. Relaying and protection requirements stated herein shall take into consideration whether Customer has more than one generator, and whether such generator(s) can be switched by Customer among multiple Points of Interconnection.
- 1.4 During GRICUA Hold Tag (the method used as an aid in protection of personnel working on or near energized equipment, whereby Reclosing of a line is disabled) conditions, Exhibit A-1, there could be times when GRICUA is not available to serve Customer's load, or there could be a need to do live line work. During these times, Customer will provide a means to physically disconnect the interconnected generators at their site.
- 1.5 Relaying and protection requirements stated herein shall take into consideration whether Customer has more than one generator, and whether such generator(s) can be switched by Customer among multiple Interconnection Points.
- 1.6 Customer must notify GRICUA when connecting to the grid if limitations, defined previously in this Agreement are exceeded.

2.0 CUSTOMER EQUIPMENT REQUIREMENTS:

Although the Generating Facility is equipped with its own protective and control circuitry, additional protective equipment (as outlined below) is required to permit parallel operation. Also, GRICUA may specify other equipment requirements in the future depending on the effects operation of the Generating Facility will have on the GRICUA electrical distribution system.

2.1 LOAD-BREAK DISCONNECT:

Customer shall install a load-break disconnect device with a visible break for use by GRICUA as a means of electrically isolating the GRICUA electrical distribution system from the Generating Facility and to establish working clearance for maintenance and repair work in accordance with GRICUA safety rules and practices, subject to the following requirements. Equipment shall be installed in accordance with NEC article 690.

- 2.1.1 The disconnect device or circuit breaker must be accessible at all times to GRICUA personnel. It cannot be located inside a gated yard or inside an enclosed space, and should be easily accessible.
- 2.1.2 The disconnect device or circuit breaker must be lockable only in the open position with a

standard GRICUA padlock. Only GRICUA personnel shall remove this padlock.
UNAUTHORIZED REMOVAL SHALL BE DEEMED A MATERIAL BREACH OF THE INTERCONNECTION AGREEMENT.

- 2.1.3 Customer is responsible for all labor and material costs to maintain, repair, or replace the disconnect device or circuit breaker.
- 2.1.4 The disconnect device or circuit breaker and its location must be approved by GRICUA prior to installation.
- 2.1.5 The disconnect device or circuit breaker may be opened at any time by GRICUA without notice.
- 2.1.6 Customer shall label the disconnect switch as shown below:
 - 2.1.6.1 Disconnect switches will comply with NEC 690-17 and will have a sign reading:
“WARNING –ELECTRIC SHOCK HAZARD - DO NOT TOUCH - TERMINALS ON BOTH THE LINE AND LOAD MAY BE ENERGIZED IN OPEN POSITION”
 - 2.1.6.2 Breaker will be labeled **“PHOTOVOLTAIC POWER SOURCE”** per NEC 705 and **“BREAKERS ARE BACKFED”** per NEC 690-64(b)5.
 - 2.1.6.3 **“CO-GENERATION SYSTEM UTILITY DISCONNECT SWITCH”** to be provided and installed by Customer.
 - 2.1.6.4 **“MAY BE ENERGIZED IN THE OPEN POSITION”**
- 2.2 CIRCUIT BREAKER OR CONTACTOR: A circuit breaker or contactor at the point of interconnection or at the generator must be used for isolating the Generating Facility from GRICUA during system over/under frequency, over/under voltage and ground fault conditions.
- 2.3 RELAYING:
 - 2.3.1 PROTECTIVE FUNCTIONS:

Protection functions for over voltage, under voltage, over frequency, under frequency, ground faults and islanding at the Point of Interconnection Point, shall be provided by an under voltage contactor. The contactor provided in the inverter performs these functions. The inverter must be listed as meeting the requirements of UL 1741 and IEEE 1547.
 - 2.3.2 GROUND FAULT PROTECTION:

Additional requirements for detecting ground faults in the GRICUA electrical distribution system will be evaluated on a per site basis.
 - 2.3.3 RELAY SETTINGS:

Relay settings and protection schemes specific to this installation, and any proposed modifications thereof, must be made available by the Customer to GRICUA for review and final approval prior to their implementation.
 - 2.3.4 Upstream Utility transmission and distribution breakers will trip open single or multiple phases due to temporary or permanent faults (e.g. lightning strikes) and will automatically reclose. It is the Customer’s responsibility to ensure the PV system has automatically disconnected from the utility before an upstream Utility distribution or transmission breaker automatically recloses onto the PV system out of synchronism. The Utility will not be responsible for any damage caused by an upstream breaker automatically opening, single phasing or reclosing on the customer’s PV system out of synchronism.
 - 2.3.5 The following minimum protection is required by the Utility to prevent the PV system from islanding the utility. The PV system must automatically disconnect from the Utility within two

seconds (120 cycles) after the voltage deviates outside a voltage range of 88-100 percent of nominal 120/240 volts. The PV system must automatically disconnect from the utility 0.1 second (6 cycles) after the frequency deviates outside the frequency range of 59.3-60.5 Hz. After the PV system has disconnected from the Utility, it shall remain disconnected until voltage and frequency is within the above voltage and frequency ranges for a minimum of 60 seconds.

- 2.3.5 In addition to the minimum protection required by the Utility, it is the Customer's responsibility to ensure that all additional personnel safety and equipment protection devices required by all other applicable technical standards, safety codes and equipment manufacturers' specifications are properly installed. The Utility is not responsible for the protection of the Customer's PV system.

2.4 SYSTEM METERING:

- 2.4.1 Customer shall install a meter socket and associated wiring to allow measurement of energy production from the Generating Facility. The meter socket specification must be submitted to GRICUA for review.
- 2.4.2 The meter socket shall be wired such that the meter runs forward while measuring generation from the Generating Facility.
- 2.4.3 There shall be no load connected between the dedicated meter and the panel breaker feeding the solar electric system.
- 2.4.4 The meter socket shall be located next to the Customer's existing GRICUA meter.
- 2.4.5 GRICUA shall provide and install a meter to measure energy production from the Generating Facility.
- 2.4.5 Meter to be labeled "**PHOTOVOLTAIC SYSTEM kWh METER.**"

3.0 RIGHT OF ACCESS:

Customer hereby grants GRICUA's employees and agents the right of immediate access to the premises of Customer 24/7, 365 days of the year, for emergency operation, maintenance or repair of GRICUA's equipment and related facilities, and at all other reasonable times for such purposes as installing, constructing, modifying, testing and maintaining GRICUA's equipment and related facilities. GRICUA shall notify Customer in advance of needing access when reasonable to do so.

4.0 POWER QUALITY REQUIREMENTS:

- 4.1 Power quality at the customer's meter must be within **published national voltage (ANSI/IEEE Standard C84.1) and harmonic (ANSI/IEEE Standard 519) standards.** The PV system must operate in synchronism with the utility at 60 Hz. The PV system must not inject direct current (DC) into the alternating current (AC) system. In addition to these standards, the customer's PV system shall not cause any noticeable interference with telephone, radio, computer or other communication systems of the Utility or any of the Utility's other customers. If the Customer's power quality does not meet these standards, or if the PV system interferes with the power quality of other Utility customers, the Utility reserves the right to disconnect the PV system from its system.
- 4.2 The Utility's flicker standard is defined as: Any system or load shall not affect the voltage of other utility customers to such an extent that the disturbance is perceived and irritating to other customers. This is approximately a 2-3 volt dip on a 120 volt basis for a very short period of time.
- 4.3 The Utility considers flicker, excessive harmonics and interference with communications system as a serious impairment to the distribution system and may disconnect the customer in accordance with paragraph 6.2 of the Interconnection Agreement.

Exhibit A-1

GRICUA HOLD TAG AND CLEARANCE PROCEDURE FOR DISTRIBUTED GENERATION

Definition

A GRICUA hold tag is defined as: “*THE DISABLING OF A RECLOSING OPERATION OF A BREAKER OR LINE RECLOSER*”. The Hold Tag is used to aid in protection of personnel working on or near energized equipment, whereby *REENERGIZING* of a line is disabled. When a Hold Tag for a circuit is in effect, if the circuit *BREAKER OR LINE RECLOSER* trips open, it prevents *RECLOSING OF A BREAKER OR RECLOSER* until it is verified that all personnel are in the clear *AND THE CREW CANCELS THE HOLD TAG*.

Distributed Generators

As it relates to Distributed Generators, circuits with hold tags shall have all potential sources of back-feed removed by opening, locking and tagging the appropriate disconnect switch. Interconnected Sources, also known as Distributed Generation (and formerly called “Co-Gens”), are those generating sources that connect in parallel with GRICUA’s distribution system. Each interconnected source customer must follow the GRICUA Interconnection Requirements.

Issuing Hold Tag

When a hold tag is issued on the circuit connected to one of these sources, the crew will be notified of the location and size of the source.

Source Size

- a) 1-10 kW Photovoltaic Distributed Generation it will be at the discretion of the crew whether to lock out or ignore the generation.
- b) 10-30 kW Distributed Generation it will be at the discretion of the crew whether to lock out or ignore the generation.
- c) Above 30 kW will be locked out locally (by a Trouble shooter or the crew), separating the generation from GRICUA electrical system before a hold tag can be issued.

Issuing Clearances

Safety guidelines require that ALL interconnected sources be visibly disconnected from the system during clearance conditions, by opening, locking and tagging the appropriate disconnect switch(s) or break(s).

Personnel

Hold Tags are only issued to GRICUA personnel and their authorized contractors that are working in the vicinity of GRICUA’s equipment.

Release of Hold Tag

Following the release of a GRICUA clearance or Hold Tag, where it was necessary for GRICUA to open the Disconnect Switch, GRICUA personnel will not close the Customer’s switch. It will be the Customer’s responsibility to close the switch after ensuring that all generation sources that could potentially be energizing the Customer’s side of the switch are off, so as to eliminate any possibility of closing the GRICUA grid onto an out-of-sync generator.

GRICUA Employee Access

Customer hereby grants GRICUA’s employees and agents the right of immediate access to the premises of Customer 24 hours a day, 7 days a week, 365 days of the year, for emergency operation, maintenance or repair of GRICUA’s equipment and related facilities, and at all other reasonable times for such purposes as installing, constructing, modifying, testing and maintaining GRICUA’s equipment and related facilities. GRICUA shall notify Customer in advance of needing access when reasonable to do so.

Note: These Procedures are subject to change from time-to-time at the sole discretion of GRICUA.