#### SAMPLE COMMERCIAL INTERCONNECT AGREEMENT (REMOVE) (GENERATING FACILITIES <u>></u> 1 MW)

## AGREEMENT FOR THE INTERCONNECTION

## OF CUSTOMER'S GENERATION

## FACILITY TO THE APS DISTRIBUTION SYSTEM

## BETWEEN

## ARIZONA PUBLIC SERVICE COMPANY

## AND

## CUSTOMER'S NAME

APS AGREEMENT NO. \_\_\_\_\_

#### AGREEMENT FOR THE INTERCONNECTION OF CUSTOMER'S GENERATION FACILITY TO THE APS DISTRIBUTION SYSTEM BETWEEN ARIZONA PUBLIC SERVICE COMPANY AND CUSTOMER'S NAME

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**OPERATING AGREEMENT** 

#### AGREEMENT FOR THE INTERCONNECTION OF CUSTOMER'S GENERATION FACILITY TO THE APS DISTRIBUTION SYSTEM BETWEEN ARIZONA PUBLIC SERVICE COMPANY AND CUSTOMER'S NAME

#### 1. PARTIES

#### 2. <u>RECITALS</u>

The following facts and consideration are an essential and material part of the terms and conditions of this agreement:

- 2.1 Customer intends to invest in, construct, own, lease, maintain and/or operate a Generating Facility ("GF"), which will be operated in electrical parallel with APS' electric distribution system ("the APS System").
- 2.2 The GF shall be permanently located at Generating Facility Location (the "Property").
- 2.3 The specifications of the GF are described as follows:

Type: Manufacturer and Model No.

Fuel or Energy Source: Photovoltaic

Unit Nameplate Output Rating: Nameplate kW

No. of Units:

Total Nameplate Output of all Units: Total system kW Output

2.4 APS and Customer intend to interconnect their respective facilities and systems in order that Customer may operate its GF in electrical parallel with the APS System. Such interconnection and parallel operation shall be undertaken in accordance with the terms and conditions of this Agreement.

Customer intends to sell all of the electrical energy output of the GF back to APS pursuant to the Power Purchase Agreement referred to in Section 2.7 of this Agreement or:

Customer intends to sell/does not intend to sell/intends to net meter excess generation to/with APS.

- 2.5 Customer's electric service is in the form of three phase alternating current at approximately 60 Hertz and approximately (example: 7,200/12,470) volts and shall be supplied by a dedicated/non dedicated utility distribution feeder.
- 2.6 Customer intends to self-certify the GF as a Qualifying Facility under the applicable regulations of the Federal Energy Regulatory Commission (the "FERC") at 18 CFR part 292.
- 2.7 The Parties have executed a (example: a Renewable Energy Purchase and Sale Agreement (Contract No. \_\_\_\_\_)), effective as of \_\_\_\_\_\_, 20\_\_\_\_ ("Power Purchase Agreement") which provides for APS' purchase of all of the energy generated by the GF during the term of the Power Purchase Agreement. The interconnection provided for herein will facilitate the sale and delivery of the total output of renewable energy from the GF pursuant to such Power Purchase Agreement.
- 2.8 In connection with the GF, Customer and APS may enter into a Construction Agreement, substantially in the form attached hereto as Appendix C.
- 2.9 The Parties shall, jointly implement and maintain an "Operating Agreement" that includes the terms and conditions set forth in Appendix C and such other terms and conditions as to which the Parties mutually agree.

#### 3. AGREEMENT

Now therefore, in consideration of the mutual covenants and agreements herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

#### 4. DEFINITIONS

The following terms, when used in this Agreement, shall have the meanings specified:

- 4.1 <u>Agreement</u>: This Agreement (also referred to as "Interconnection Agreement") titled "Agreement for the Interconnection of Customer's Generation Facility to the APS Distribution System between Arizona Public Service Company and Customer," together with other exhibits attached hereto and incorporated herein by specific reference.
- 4.2 <u>Advanced Metering Infrastructure (AMI) Device (also referred to as an "Automated Meter")</u>: A device such as a kWh meter or system that collects and measures energy usage. AMI Devices may transmit data via a radio and/or cell phone communication system with other metering devices.
- 4.3 <u>APS Interconnection Requirements (also referred to as the "APS IRDG")</u>: The APS document titled "Interconnection Requirements for Distributed Generation," which outlines APS's interconnection requirements to interconnect a GF to the

APS System, available at <u>http://www.aps.com/library/solar%20renewables/InterconnectReq.pdf</u> and incorporated herein.

- 4.4 <u>The APS System (also referred to as "APS's System")</u>: Refers to APS' electric Transmission or Distribution system. Also referred to as APS' System.
- 4.5 <u>Behind the Meter</u>: Describes a power generation application in which the Generating Facility generation is not directly interconnected to the APS-owned electric distribution or transmission system, but rather, to a customer-owned electric system that is itself electrically connected to the APS System via an APS retail billing meter.
- 4.6 <u>Bi-Directional Meter</u>: A meter having two separate metering registers, one to record electricity delivered to the Customer and the other to record electricity received from the Customer.
- 4.7 <u>Cogeneration Facility</u>: Any facility that sequentially produces electricity, steam or forms of useful energy (e.g., heat) from the same fuel source and which are used for industrial, commercial, heating, or cooling purposes.
- 4.8 <u>Customer</u>: An APS account holder or APS "Customer of Record" that receives electric service from APS and which may also generate electricity at the Property receiving electric service.
- 4.9 <u>Disconnect Device</u>: A Disconnect Switch or a rack-out circuit breaker acceptable to APS to electrically isolate the Customer's GF from the APS System.
- 4.10 <u>Disconnect Switch</u>: A visible open disconnect device installed by Customer that completely isolates the Customer's GF from the APS System, including the Utility metering equipment located at the SES.
- 4.11 Electric Service: Service provided by APS to Customer in accordance with all applicable APS requirements, including but not necessarily limited to APS Service Schedule 1 ("Terms and Conditions for Standard Offer and Direct Access Services") and the APS ESRM, whereby electricity may be delivered by APS to Customer, or electricity be received by APS from Customer. may APS Service Schedules available The are at: http://www.aps.com/en/ourcompany/ratesregulationsresources/serviceplaninform ation/Pages/home.aspx
- 4.12 <u>ESRM</u>: APS' Electric Service Requirements Manual, available at <u>www.aps.com/esrm</u>.
- 4.11 <u>Generating Facility (also referred to as "GF" or "Distributed Generation Facility")</u>: All or part of the Customer's electrical generator(s) or inverter(s), together with the interconnection facilities and all protective, safety, and associated equipment and improvements associated with the interconnection to the APS system. A Generating Facility also includes any Qualifying Facility (QF).

- 4.12 <u>Generator</u>: A rotating machine or static inverter used to produce electrical power.
- 4.13 Minimum Protective Devices, Relays, and Interconnection Requirements:
  - The minimum required protective relaying and/or safety devices or requirements specified in the APS Interconnection Requirements, as may be revised from time to time, for the purpose of protecting only APS and its other customer facilities from damage or disruptions caused by a fault, malfunction or improper operation of the Customer's GF. Minimum Protective Devices, Relays and Interconnection Requirements do not include relaying, protective or safety devices as may be required by industry and/or government codes and standards, equipment manufacturer requirements and prudent engineering design and practice to fully protect Customer's GF or facilities; those are the sole responsibility of the Customer.
- 4.14 <u>NRTL</u>: A Nationally Recognized Testing Laboratory certified by OSHA to perform a particular test standard or standards.
- 4.15 <u>OSHA</u>: Occupational Safety and Health Administration. See <u>www.osha.com</u>.
- 4.16 <u>Performance Meter</u>: a meter that may be required by an applicable rate schedule or other APS requirement to record the output of the GF.
- 4.17 <u>Point(s) of Interconnection</u>: The physical location(s) where APS' service conductors are connected to Customer's service conductors or bus to allow parallel operation of Customer's GF with the APS System.
- 4.18 <u>Property</u> Has the meaning set forth in <u>Section 2.2</u>.
- 4.19 <u>Qualifying Facility (QF)</u>: Any Cogeneration or Small Power Production Facility that meets the criteria for size, fuel use, efficiency, and ownership as promulgated in 18 CFR, Chapter I, Part 292, Subpart B of the Federal Energy Regulatory Commission's Regulations, as amended.
- 4.20 <u>Readily Accessible</u>: Capable of being reached quickly and conveniently on a 24hour basis, pursuant to Section 2 of the APS Interconnection Requirements, without requiring climbing over or removing obstacles, or obtaining permission, keys or security clearances.
- 4.21 <u>Rotating Machine</u>: An induction or synchronous machine used to generate electric power.
- 4.22 <u>Service Entrance Section (SES)</u>: The Customer-owned main electrical panel or equipment located at its premises to which the Utility delivers electric energy via the Utility service drop or service lateral.
- 4.23 <u>Small Power Production Facility</u>: A facility that uses primarily biomass, waste, or renewable resources, including wind, solar, and water to produce electric power.
- 4.24 <u>Static Inverter</u>: An electronic device used to convert direct current (DC) power into alternating current (AC) power.

#### 4.25 <u>Termination Obligations</u>: Has the meaning set forth in Section 5.

#### 4.26 <u>UL</u>: Underwriters Laboratories Inc. See <u>www.ul.com</u>.

#### 5. EFFECTIVE DATE AND TERM

This Agreement shall commence on the Effective Date and shall remain in effect until (a) it is terminated by mutual agreement of the Parties, (b) it is replaced or superseded by another interconnection agreement between the Parties with respect to the GF(s), (c) it is terminated by either Party pursuant to a Default of this Agreement as specified in Section 17 hereof, (d) electric service to the Customer at the Property is terminated, or (e) it is terminated by either Party upon 30 days advance written notice. Upon termination of this Agreement, Customer shall immediately permanently lock open the Disconnect Switch and shall be responsible for ensuring that the electrical conductors connecting the GF to Customer's distribution system or the APS System are immediately lifted and permanently removed, so as to preclude any possibility of interconnected operation in the future (collectively, the "Termination Obligations"). In the event Customer fails to perform the Termination Obligations, Customer hereby consents and grants access to APS to enter the premises where the GF and its related facilities are located in order to perform the Termination Obligations at Customer's expense. APS shall have no liability for personal or bodily injury or for damage to the property of Customer or any third party, arising from or related to the Termination Obligations and Customer hereby agrees to indemnify APS from and against any such liability.

#### 6. INTERCONNECTION FACILITIES AND POINT(S) OF INTERCONNECTION

Customer shall, at its expense, install and be responsible for all facilities required to interconnect Customer's GF to the APS System including, but not limited to, connection, transformation, switching, protective relaying, metering and safety equipment, including the Customer-owned, visibly-open and groundable Disconnect (Utility Isolation) Switch(es). During the term of this Agreement, Customer shall maintain the GF, connection facilities, and all other materials required hereunder in a safe and in good operating condition and in accordance with Section 9 of this Agreement.

#### 7. NOTICES

All written notices pursuant to this Agreement shall be delivered by registered or certified mail including express overnight courier service, postage prepaid, return receipt requested, or by electronic mail (scanned PDF image) at the address of the Party set forth below as follows:

#### To APS:

Arizona Public Service Attn: Energy Delivery Renewable MGMT P.O. Box 53933, MS 3108 Phoenix, AZ 85072-3933

Telephone: 602-371-6160 Email: commercial-renewables@aps.com

#### To Customer:

Customer's Name Attn: Customer's Name Customer's mailing address City, State Zip

Telephone: Customer's phone number Email: Customer's email

Either Party may change its address by providing written notice given to the other Party in the manner provided above. Any such notice shall be deemed to have been duly given and served on the date which is three (3) business days after the date deposited in the United States mail in accordance with this Section 7, or on the date of receipt, if delivered by express overnight courier service or electronic mail (if delivered during the normal business hours of the recipient).

#### 8. ENTIRE AGREEMENT

- 8.1 This Agreement and the documents attached hereto or referenced herein constitute the entire Agreement between the Parties relating to the subject matter hereof, there being no other agreements or understandings, written or oral, other than those contained in this Agreement and the attachments hereto. In the event of a conflict among the provisions of this Agreement and an attached or referenced document, this Agreement shall govern. This Agreement does not modify, change or impact any other agreement between the parties relating to the supply of electric service, or the sale of, or purchase of, electric power.
- 8.2 Attached to this Agreement and made part hereof are the following Appendices:

APPENDIX A: Electrical One-Line and Three-Line Diagrams

APPENDIX B: Map of Plant Location and Site Plan

APPENDIX C: Form of Construction Agreement

APPENDIX D: Form of Operating Agreement

8.3 The Parties may amend this Agreement only by written instrument signed by both Parties.

#### 9. <u>CUSTOMER'S OBLIGATIONS</u>

- 9.1 Customer shall not commence interconnected operation of the GF with the APS System until the GF has been inspected by an authorized APS representative and written notification is received from APS allowing the GF to commence parallel operation with the APS System. Customer shall give at least ten (10) business days written notice to APS when initial startup is to begin. APS shall have the right to have a representative present during initial energizing and testing of Customer's GF.
- 9.2 [NOTE: only one of the two paragraphs below apply]

Customer shall, prior to commencing parallel operation with the APS system, provide documentation acceptable to APS (including, without limitation, FERC Form 556), that confirms the GF has achieved Qualifying Facility (QF) status under 18 CFR, Chapter I, Part 292, Subpart B, including, without limitation, §292.207 of the FERC's regulations, as amended.

[OR]

The GF is installed in a Behind the Meter application. Customer represents that to the best of Customer's knowledge, even when considering the expected degradation of the GF's power rating over its expected life and future potential increased electrical load needs of the Customer, the GF is not expected to

produce more energy over the 12 month period between January 1 and December 31 of any given year than what the Customer consumes behind the APS bi-directional billing meter.

- 9.3 Customer shall design own and be fully responsible for the costs of designing, installing and maintaining:
  - 9.3.1 The GF in accordance with the requirements of all applicable construction and safety codes, laws and governmental agencies having jurisdiction, and in accordance with the requirements set forth in the ESRM, the APS Interconnection Requirements Manual, and the terms and conditions of this Agreement.
  - 9.3.2 Control and protective devices, in addition to the Minimum Protective Devices and Relays as required by the APS Interconnection Requirements, in order to protect the APS System and to protect the GF from abnormal operating conditions such as, but not limited to, electrical overloading, abnormal voltages, and fault currents. Such protective devices shall promptly disconnect the GF from the APS System in the event of a power outage on the APS System.

The GF shall be operated with all of the protective relaying, and any Customer operating procedures and switching apparatus in service whenever the GF is connected to, or is operated in parallel with, the APS System.

#### [Non-dedicated Feeder]

Static inverters shall be tested and certified to UL *Standard for Inverters, Converters and Controllers for use in Independent Power Systems,* UL 1741, by a Nationally Recognized Testing Laboratory (NRTL) certified by OSHA to perform the UL1741 test standard. In addition, a redundant over/under voltage relay will be required for inverters rated at greater than 500 kW

OR:

[Dedicated Feeder with Transfer Trip or Hot Bus/Hot Line Interlock]

Static inverters shall be tested and certified to UL Standard for Inverters, Converters and Controllers for use in Independent Power Systems, UL1741, by a Nationally Recognized Testing Laboratory (NRTL) certified by OSHA to perform the UL1741 test standard or

Customer shall ensure, at a minimum, that the inverter performance tests specified below are performed and certified by a NRTL to ensure compliance with the following sections of IEEE 1547-2003 (per section 40.1 of UL 1741-2010):

Section 4.3 Power Quality

- Section 4.3.1 Limitation of DC injection
- Section 4.3.2 Limitation of flicker induced by the DR
- Section 4.3.3 Harmonics

Customer shall provide APS with a copy of the test results and certification from the NRTL, for APS review and approval.

9.3.3 An acceptable visibly "open" isolation point will be provided by the Customer on the Customer's side of the SES Bi-Directional Meter section, to electrically isolate the Customer-owned facilities from all APS electric service equipment in order to establish a safe work area for APS personnel.

The isolation point will comprise a gang-operated load break Disconnect Switch identified as the Photovoltaic System Utility Disconnect Switch (also sometimes referred to as the "Utility Isolation Switch") as shown on the One Line Diagram sheet \_\_\_\_\_\_ attached in Appendix A of this Agreement. The Disconnect Switch shall be capable of being locked in a visibly "open" position by a standard APS padlock, and shall be installed in Readily Accessible place so as to provide easy and unrestricted accessibility to APS personnel on a 24-hour basis. APS shall have the right to lock open either Disconnect Switch, without notice to Customer, or require Customer to lock open either Disconnect Switch (i) when interconnected operation of either GF with the APS System could adversely affect the APS System, or endanger life or property, or (ii) upon termination of this Agreement.

Customer will be required to electrically isolate the GF from the APS System and install grounds acceptable to APS at the time of install and in the event that APS needs to perform subsequent maintenance on its equipment in the metering compartment, or electric service equipment.

When an electrical clearance is required by APS and the APS electric service to Customer is at a phase to phase voltage of greater than 500 V, Customer shall provide personnel and equipment on site to open the Disconnect Switch so as to provide a visible open, groundable (on the utility side) and lockable isolation point acceptable to APS personnel.

- 9.3.4 Interconnection facilities on Customer's premises as may be required to deliver power from Customer's GF to the APS System at the Point of Interconnection, and all equipment downstream (Customer's side) of the Customer's service entrance section.
- 9.3.5 Where the applicable rate schedule or other APS requirement and/or agreement requires meter(s) to be installed to record the output of the GF generator(s), Customer will provide, at its expense, a dedicated phone line to each such meter and also to the GF service entrance section utility meter(s) and/or sub meters if necessary. Each dedicated phone line is to be landed on the APS-provided telephone interface module, normally located within two feet of the meter.

- 9.4 The electrical output of Customer's GF shall not contain harmonic content, which may cause disturbances on or damage to the APS System or equipment, or other parties' systems, such as but not limited to computer, telephone, communication and other sensitive electronic or control systems.
- 9.5 Customer shall exercise reasonable care to assure that the electrical characteristics of its load and GF, such as deviation from sine wave form or unusual short interval fluctuations in power demand or production, shall not be do not result in impairment of service to other customers or in interference with operation of computer, telephone, television or other communication systems or facilities. The current imbalance for a three phase system, as measured at the customer's service entrance section shall not be greater than ten percent (10%) at any time. When the GF acts as a net load to the APS System, the power factor of the Customer's facility shall not be less than ninety percent (90%) lagging, but shall not be leading, unless agreed to in writing or otherwise required by APS.
- 9.6 Customer shall protect, operate and maintain the GF safely, and in accordance with all applicable laws as well as current and prudent engineering and electric utility operations practices and methods prevailing in the region where the GF is installed.
- 9.7 Prior to the installation of the GF, Customer shall submit to APS, for APS review and written acceptance, written equipment specifications, and detailed plans of the interconnections facilities, control and protective devices and settings, any required breaker control schematics, and facilities as specified in the APS Interconnection Requirements document, as may be revised from time to time, for the design, installation and operations of its GF.
- 9.8 Following APS written acceptance of Customer's proposed GF and associated facilities, neither Customer nor its successors or assigns shall remove, alter or otherwise modify or change the equipment specifications, including, without limitation, the plans, control and protective devices or settings, and in general the GF's system specifications configuration or any facilities appurtenant thereto. If Customer desires to make such changes or modifications, Customer shall resubmit to APS plans describing said changes or modifications for acceptance by APS. No such change or modification may be made without the prior written approval of APS.
- 9.9 If Customer utilizes the APS System to facilitate start-up of its GF, the voltage flicker level shall not exceed the APS standards in effect during the term of this Agreement; as such standards may be modified from time to time.
- 9.10 Customer shall obtain and maintain all required permits and inspections indicating that Customer's GF complies with all applicable construction and safety codes.
- 9.11 In the event that APS provides more than one point of electrical service delivery to Customer's Property, then Customer shall (a) have controls and/or operating procedures in place that are acceptable to APS to ensure that APS' points of delivery are never connected together or electrically paralleled in anyway; and (b)

ensure that the GF is never connected to an electrical service other than the one specified in this Agreement.

- 9.12 The Parties acknowledge that Customer may transact with one or more third parties in connection with the interconnection, operation and/or ownership of the GF. Such third parties may include, but shall not be limited to, investors, owners, lessors, lessees, or operators of the GF, property owner(s), or a third party APS retail electric customer of record, and any transferee thereof (collectively, "Representatives"). Customer shall inform all such Representatives of the requirements of this Agreement and shall ensure that such Representatives: (i) comply with the terms of this Agreement, specifically including, but not limited to, the obligations set forth in this Section 8; and (ii) do not take actions that interfere with performance of the Agreement by APS or Customer. Customer shall be liable for any breach of this Agreement by its Representatives.
- 9.13 Customer shall, at a minimum, have the shutdown protective devices specified in Section 9.3.2, as well as the associated Generator Breaker, functionally tested and calibrated (i) at the time of installation; (ii) periodically at intervals not to exceed 4 (four) years; and (iii) from time to time as may be requested by APS. Such testing and calibration shall be conducted at Customer's expense by qualified personnel. Customer shall provide APS with a copy of the calibration and functional test results. Customer shall also notify APS at least ten (10) working days in advance that such tests are to be performed and allow APS personnel to witness such tests.
- 9.14 [Note: only one of the two paragraphs below apply]

Customer's GF is installed in a Behind the Meter installation and, as such, no Operations and Maintenance ("O&M") fees for new APS distribution facilities apply.

[OR]

Customer shall pay annual fees for the operations and maintenance ("O&M") of APS' new distribution facilities built to accommodate the interconnection of the Customer's GF to the APS System.

- 9.14.1 O&M fees shall be paid prospectively. The first payment shall be made within thirty (30) days after the initial interconnected operation date ("Initial Energization Date") and shall be paid annually on the anniversary of the Initial Energization Date thereafter throughout the term of this Agreement and any extensions thereof. The amounts to be paid shall be in accordance with Section 9.12.3 of this Agreement and shall be submitted to the APS at the address stated on the APS invoice. Failure by APS to deliver an invoice to Customer shall not relieve Customer of its responsibility to pay the amounts due hereunder.
- 9.14.2 Should APS tap the feeder line serving the Customer's GF to support future load service to other APS customers, Customer shall be relieved of its obligation to make future O&M payments under this Section 9.12.

9.14.3 The first year's payment shall be \$\_\_\_\_\_ (to be provided by APS at a later date following true-up, within 120 days of completion, of the project costs, presently expected to be approximately \$XX,XXX) and shall escalate at \_\_\_\_\_ % compounded annually thereafter for the term of this Agreement.

#### 10. MUTUAL UNDERSTANDINGS

- 10.1 Customer hereby grants APS permission to install certain instrumentation equipment, including AMI Devices, at a location on Customer's premises that is mutually agreed to by the Parties. Such equipment shall be owned, furnished, installed and maintained by APS at its sole cost and shall not interfere with Customer's use and operation of its premises; provided, however, Customer shall afford APS continuing access to this equipment consistent with the requirements of APS' tariffs.
- 10.2 APS' makes no warranty or representation to Customer or any third party regarding the safety, durability, reliability, performance or fitness of Customer's GF or service facilities, its control or protective devices or the design, construction, installation or operation thereof.
- 10.3 Customer acknowledges that any third party contractors that Customer uses to provide, install or maintain its GF ("Third Party Contractors") are not agents, contractors, or employees of APS. Certain Third Party Contractors may use APS trademarks or logos, such as but not limited to the logo "APS Qualified Solar Installer," to promote various APS incentive or referral programs, or to indicate such Third Party Contractor is qualified to participate in such APS programs. However, Customer understands and agrees that the Third Party Contractor is retained by Customer as an independent contractor and that the Third Party Contractor is solely responsible for the goods, equipment, materials and all services provided by the Third Party Contractor to Customer for the GF. Customer hereby indemnifies, releases and holds APS, its officers, directors, employees, agents, representatives, affiliates, successors and assigns harmless from any liability, damage, cost, or expense, including reasonable attorneys' fees and legal costs, that arise out of or result from the Third Party Contractor's sale or use of goods, equipment, materials or its performance of services.
- 10.4 APS (including its employees, agents and representatives) shall have the right to enter Customer's premises at all reasonable times to (a) inspect Customer's GF, protective devices, and to read or test instrumentation equipment that APS may install, provided that reasonable notice is given to Customer prior to entering its premises; (b) maintain or repair APS equipment; (c) immediately and without prior notice disconnect or cause Customer to immediately disconnect, the GF or otherwise render the GF disconnected from the APS system (including by opening the Disconnect Switch) if, in APS' opinion, a hazardous condition exists or such immediate action may be necessary to protect persons, APS facilities, or other customers' or third parties' property and facilities from damage or interference, or if, in APS' opinion, any of the protective devices is not or does not

appear to be operating properly; (d) verify the Disconnect Switch is opened and properly grounded, if an operating clearance is required by APS personnel.

- 10.5 If, at any time, APS should have reason to question the integrity of any of the GF protective and switching apparatus and believes that such loss of integrity may harm or impair the APS' System, then Customer shall demonstrate, to APS' reasonable satisfaction, the correct calibration and operation of the equipment in question.
- 10.6 APS will not install or maintain any lines or equipment on Customer's side of the Point of Interconnection except its metering and telecommunication equipment and possibly some research equipment pursuant to Section 10.1 of this Agreement. Only authorized APS employees or representatives are permitted to make and energize the service connection between the APS System and the Customer's SES conductors. Such employees and representatives carry credentials, which they will show to Customer upon request.
- 10.7 Notwithstanding any other provisions of this Agreement, APS shall have the right to unilaterally file with the Arizona Corporation Commission (ACC), pursuant to the ACC's rules and regulations, an application for a change in requirements, charges, classification, or service, any rule, regulation or agreement relating hereto.

#### 11. ADDITIONAL TERMS AND CONDITIONS

11.1 Prior to commencing operation fo the Customer's GF:.

#### 11.1.1 [GF aggregate size > 10 MW]

Customer shall ensure that the GF is equipped and capable of meeting all of the following requirements:

- (a) Capability to operate in Power Factor Control (PFC) mode at a fixed power factor within plus or minus 0.95 pf at the maximum continuous nameplate rated MW output of the generator(s).
- (b) Capability to operate at any MVAR output at any power level within the MVAR range calculated in item (a) above while the generator is on line.
- (c) Capability to operate in Automatic Voltage Regulator (AVR) mode and shall regulate the voltage at a fixed value within plus or minus 0.95 pf within 0.95 to 1.05 pu voltage range.
- (d) When the GF acts as a net load to the APS System, the power factor of the net load shall not be less than 90% lagging.
- 11.1.2 APS will specify, dependent upon the results of the interconnection study and/or changes to the APS System, whether Customer will operate the

GF in the voltage regulating or power factor control mode as specified in Section 11.1.1 above.

11.1.3 APS will provide and instal an EMS Bi-Directional Meter located in the SES. Such EMS Bi-Directional Meter and the Customer Main/Generator Breaker ("Main/Generator Breaker") located in the SES and shown on the One Line Diagram \_\_\_\_\_\_ attached in Appendix A, shall be equipped by Customer for remote monitoring and breaker operating capability by APS. At Customer's expense, APS will provide, operate and maintain a Remote Terminal Unit (RTU). Customer shall install the RTU enclosure as provided by APS, and APS will install and program the RTU. Customer shall provide a 120 VAC, 15 Amp (minimum) power supply to the RTU, and shall install rigid metallic conduits for all required circuits associated with the RTU as shown in Appendix A. Customer will provide hard-wired open/close contact (b contact) status points and control wiring to the RTU for the Generator Breaker so that APS can monitor the status of this Generator Breaker remotely.

Customer will provide, install and maintain Main/Generator Breaker control circuitry ("Breaker Control Scheme") located at the SES to accept remotely initiated trip/block close and close permissive contacts from the APS RTU to control the Main/Generator Breaker. APS trip contacts will trip open (and block close) the Generator Breaker to isolate the Generators from the APS System. Each trip contact originates from a latching relay in the RTU cabinet that will maintain the Main/Generator Breaker in the open position until such time that APS issues a close permissive. The Main/Generator Breaker control logic will allow Customer to operate the associated Main/Generator Breaker once APS enables a close permissive. If a local/remote control switch is installed to allow for maintenance of the GF, Customer shall ensure that APS is able to remotely trip the Main/Generator Breaker open at any time regardless of the position of the local/remote control switch.

- 11.1.4 APS will provide, at Customer's expense, a multi channel fiber optic link originating at an RTU/Fiber Patch Panel installed at the APS \_\_\_\_\_\_substation and terminating at an APS provided Fiber Patch Panel feeding the RTU located at the GF as shown in Appendix A. Customer shall provide conduit between the GF Fiber Patch Panel enclosure and the RTU enclosure as shown in Appendix A, and APS will install the fiber cable between them. The RTU and associated equipment installed at the GF must be accessible by APS personnel on an unrestricted 24 hour basis.
- 11.1.5 Customer shall provide a leased data quality VG-36 phone line from the RTU through the Telco Point of Presence (POP) network to the APS designated location as shown on the One Line Diagram in Appendix A.
- 11.1.6 As shown in Appendix A, Customer shall provide conduits between the RTU enclosure and the GF Main/Generator Breaker bay and also between the RTU enclosure and the metering bay in the SES.

- 11.1.7 APS shall install communication wiring in the conduit between the bidirectional EMS meter and the RTU, and Customer shall install the fiber optic link and the Main/Generator Breaker control/status wiring between the Main/Generator Breaker bay and the RTU.
- 11.1.8 Customer shall include an Uninterruptable Power Supply (UPS) for the Breaker Control Scheme and the SEL 351-7 relay to be operational if the normal power source should fail. The UPS shall be capable of supplying backup power for at least six continuous hours. The UPS shall be powered by a dedicated circuit connected upstream (Utility side) of the Main/Generator Breaker so it remains energized if the Main/Generator Breaker is opened. During the term of this agreement, Customer will perform periodic maintenance on the UPS batteries to ensure that it remains in operational condition at all times.
- 11.2 The leased data quality VG-36 phone line provided must maintain a constant communication signal. If the signal becomes unavailable, APS (i) will notify Customer that the signal is unavailable; (ii) may require Customer to disconnect the GF until the signal becomes available; and (iii) may dispatch a troublemen to open and lock out the GF Disconnect Switch until the signal becomes available. The Customer will be responsible for remedying the condition to APS' satisfaction. Failure to maintain this communication link may be cause for APS to open the Main/Generator Breaker without liability until Customer can remedy the communication link.
- 11.3 Customer warrants that it has installed or caused to be installed and will maintain a Schweitzer SEL 351-7 relay for transfer trip control of the Main/Generator Breaker located in the GF SES along with the associated instrumentation transformers and circuitry. APS will install, at Customer's expense, a SEL 351-7 relay at the APS \_\_\_\_\_\_ Substation.
  - 11.3.1 In accordance with the APS ESRM, APS will provide Customer with the overcurrent relay settings (50, 50N, 51, and 51N for the SEL 351-7 relay located at the GF SES for coordination with the SEL 351-7 relay at the APS \_\_\_\_\_\_ Substation.

Additionally, Customer will activate device functions 27 (Undervoltage), 59 (Overvoltage), and 81 O/U (Over/Under Frequency) in the SEL 351-7 relay located at the GF SES. Trip settings for these functions will be in accordance with the APS Interconnection Requirements. Customer will submit settings for APS review and approval.

11.3.2 Customer will provide and install a SEL 2829M fiber optic transceiver along with the SEL 351-7 relay located at the GF SES and a fiber optic link (6 fiber pairs, Single Mode fiber) from the Main/Generator Breaker relay to the APS Fiber Patch Panel enclosure (through the APS RTU enclosure) to facilitate a transfer-trip protective scheme through a SEL Mirrored Bit communication link with the APS substation SEL 351-7 relay. The fiber optic link is to be routed through the dedicated conduit from the Main/Generator Breaker bay to the APS RTU enclosure as shown in Appendix A. APS will terminate the fiber optic link in the APS Fiber Optic Patch Panel. APS will coordinate and commission the transfer-trip protective relaying scheme from the APS substation breaker to the GF Main/Generator Breaker.

- 11.4 APS has the right to open the Main/Generator Breaker remotely, without prior notice to Customer, if, in APS's sole and reasonable judgment it becomes necessary to do so (i) due to abnormal APS System operational conditions, or (ii) due to adverse or abnormal operating conditions arising from the Customer's GF(s). In either scenario, APS will attempt to notify Customer of such action as soon as reasonably possible. APS will initiate a close permissive signal to the Generator Breaker once APS determines any such operational conditions have returned to normal. Following APS's issuance of a close permissive signal, APS will notify Customer that it may proceed, as it sees fit, to manually close the Generator Breaker by calling Customer as agreed upon in accordance with Appendix D. Customer, at its expense, will be responsible for the correction of any such conditions described in 11.4(ii) to APS's satisfaction. Customer accepts full responsibility for any damages caused by failure of its GF(s) to shut down upon loss of utility voltage.
- 11.5 In the event APS or its authorized agents lock open, or cause to be locked open, the Disconnect Switch, Customer shall not remove or tamper with such lock.

#### 12. SUCCESSORS AND ASSIGNS

Customer may not assign its rights nor delegate its duties under this Agreement, or any part of such rights or duties, without the prior written consent of APS. Any such assignment or delegation made without such written consent shall be null and void. Consent for assignment shall not be unreasonably withheld. This Agreement shall be binding on and inure to the benefit of the respective successors and assigns of the Parties.

#### 13. EFFECT OF SECTION HEADINGS

Section headings appearing in this Agreement are inserted for convenience only, and shall not be construed as interpretations of text.

#### 14. INDEMNITY

To the extent permitted by applicable law, each Party hereby agrees to indemnify, defend and hold harmless the other Party, its officers, agents, and employees for, from and against any and all loss, claims, actions, damages, expenses and liability, of any kind or nature, arising from personal injury (including without limitation, death) of any person other than an employee of the indemnified party, or any damage or loss to any tangible third party property, to the extent caused by any willful, wanton or reckless misconduct or any negligent or intentional act or omission, arising out of, resulting from, or related to a Party's performance or non-performance under this Agreement. This indemnification shall survive the termination or expiration of this Agreement.

#### 15. <u>GOVERNING LAW</u>

This Agreement shall be governed by, construed, and enforced in accordance with the laws of the State of Arizona applicable to contracts entered into and to be performed solely within such state, without reference to its principles governing conflicts of laws.

#### 16. UNCONTROLLABLE FORCES

No Party shall be considered to be in default in the performance of any of its obligations under this Agreement (other than obligations of said Party to pay sums to be paid by it hereunder, and other costs and expenses) when a failure of performance shall be due to an uncontrollable force. The term "Uncontrollable Force" shall be any cause beyond which, by exercise of due diligence such Party could not reasonably have been expected to avoid or control, and which by exercise of due diligence it shall be unable to overcome or control, including, but not restricted to, substantial failure of or threat of substantial failure of facilities, flood, earthquake, tornado, severe storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, strikes, shortage in labor, materials or supplies, sabotage, restraint by court order or public authority, and action or non-action by or inability to obtain the necessary authorizations or approvals from any governmental agency or authority. Nothing contained herein shall be construed so as to require a Party to settle any strike or labor dispute in which it may be involved. Either Party rendered unable to fulfill any of its obligations under this Agreement by reason of an uncontrollable force shall give prompt written notice of such fact to the other Party and shall exercise due diligence to remove such inability with all reasonable dispatch.

#### 17. EVENTS OF DEFAULT; REMEDIES

- 17.1 No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of an Uncontrollable Force as defined in this Agreement or the result of an act of omission of the other Party. Upon a Breach, the non-breaching Party shall give written notice of such Breach to the breaching Party. Except as provided in Section 17.2, the breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.
- 17.2 If a Breach is not cured as provided in this article, or if a Breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a Default and terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity.
- 17.3 Notwithstanding any provision herein to the contrary, EACH PARTY'S LIABILITY UNDER THIS AGREEMENT SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, AND IN NO EVENT SHALL EITHER PARTY BE LIABLE TO

THE OTHER PARTY OR ANY THIRD PARTIES FOR INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR EXEMPLARY DAMAGES, IN TORT, CONTRACT OR OTHERWISE. APS shall not be liable to Customer for any damages occasioned by fluctuations, interruptions or curtailment of the APS System. These limitations on damages survive the expiration or termination of this Agreement.

#### 18. <u>SEVERABILITY</u>

Whenever possible, each provision of this Agreement will be interpreted in such a manner as to be effective and valid under applicable law, but if any provision of this Agreement is held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provision had never been contained herein or therein.

#### 19. <u>WAIVER</u>

The failure by either Party hereto to require strict performance by the other Party of any of the provisions, terms and conditions contained in this Agreement shall not waive, affect or diminish any right of such party at any time or times hereafter to demand strict performance thereof, and no waiver shall operate as a waiver of any other right or any right with respect to the same condition on a future occasion.

#### 20. DISPUTE RESOLUTION

- 20.1 If a dispute arises between the Parties regarding a matter provided for in this Agreement, or a Party's performance of its obligations pursuant to this Agreement, the Parties agree that such dispute will be resolved, to the extent practicable, in the manner prescribed in this Section 20.
- 20.2 Promptly upon the occurrence of the dispute, the aggrieved Party will notify the other Party in writing (the "<u>Claimant's Statement</u>"), setting forth in sufficient detail the basis for the dispute, the aggrieved Party's position and its proposal for resolution of the dispute. Within seven (7) business days following receipt of the Claimant's Statement, the other Party will respond in writing (the "<u>Responsive Statement</u>") setting forth in sufficient detail the respondent's position and its proposal for resolution of the dispute.
- 20.3 Within five (5) business days after the aggrieved Party's receipt of the Responsive Statement, the Parties will meet (either in person or telephonically) and attempt in good faith and expeditiously to negotiate a resolution to the dispute. In attendance for each Party at that session and throughout the dispute resolution procedure described in this Section 20 will be a representative or representatives of each Party who is authorized to act for the Party and resolve the dispute without resort to higher authority/

20.4 In the event such negotiations do not result in a resolution of the dispute within thirty (30) calendar days of the Claimant's Statement, either Party will be entitled to seek appropriate relief in a court of competent jurisdiction.

#### 21. ATTORNEY'S FEES

In the event either Party shall institute legal proceedings under or arising out of this Agreement and obtain a judgment or decree in its favor, including appeal to enforce any of the terms of this Agreement, the prevailing Party shall be entitled to recover, in addition to any other remedy, its reasonable actual attorney's fees, court costs, cost of investigation and other related costs allowed by law.

#### 22. INSURANCE

#### [Static Inverter System $\leq$ 2MW or Rotating Machine $\leq$ 50 kW]

During the term of this Agreement and any extensions thereof, Customer at its option may elect to maintain public liability and property damage insurance to cover Customer's use, interconnection and operation of the GF as contemplated in this Agreement. Any insurance coverage shall not constitute a limitation of Customer's indemnity under Section 14, Indemnity hereof.

#### [OR]

#### [Static Inverter System > 2MW or Rotating Machine > 50 kW]

Until all obligations under this Agreement are satisfied, and without limiting Customer's indemnification obligations under Section 14, Customer shall, at its own expense, maintain in force general liability insurance without any exclusion for liabilities related to the interconnection undertaken pursuant to this Interconnection Agreement. The amount of such insurance shall be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the GF being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. The Customer shall obtain additional insurance only if necessary as a function of owning and operating a GF. Such insurance shall be obtained from an insurance provider authorized to do business in Arizona. Certification that such insurance is in effect shall be provided upon APS's request, except that the Customer must show proof of the insurance to APS no later than ten (10) business days prior to the date upon which the GF commences interconnected operation with the APS System. If the Customer is determined by APS to be of sufficient credit-worthiness, the Customer may propose to self-insure for such liabilities.

	Customer
<b>Resv/Install</b>	#
	kW

#### 23. SIGNATURE CLAUSE

IN WITNESS WHEREOF, the PARTIES have caused this Agreement to be executed by their duly authorized representatives as of the date hereinabove set forth:

"APS":

Signature:	
Name:	
Title:	
Date Signed:	
"Customer":	
Signature:	
Name:	
Title:	

Date Signed:

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### 24. ATTACHMENTS

Attached to this Agreement and made a part hereof are the following Appendices:

- APPENDIX A: Electrical One-Line and Three-Line Diagrams
- APPENDIX B: Map of Plant Location and Site Plan
- APPENDIX C: Form of Construction Agreement
- APPENDIX D: Form of Operating Agreement

#### APPENDIX A

## ELECTRICAL ONE-LINE, THREE-LINE AND CONTROL SCHEMATIC DIAGRAMS

(NOTE: This Appendix A shall be revised by way of final drawings to be submitted by Customer to APS for review and approval in accordance with Section 9.7.)

### APPENDIX B

#### MAP OF PLANT LOCATION AND SITE PLAN

(NOTE: This Appendix B shall be revised by way of final drawings to be submitted by Customer to APS for review and approval in accordance with Section 9.7).

## APPENDIX C

Form of Construction Agreement



#### **CONSTRUCTION AGREEMENT** (For the Construction of Electric Distribution Facilities to Generating Facility)

- 1. CONSTRUCTION
  - 1.1 APS shall construct electric distribution facilities as an extension of its present facilities in order to serve \_\_\_\_\_\_, Arizona, in accordance with the attachments set forth in Section 5 to this Agreement.

  - 1.3 Distribution facilities shall be installed by APS in the location indicated on the attached sketch (es). All suitable easements or rights-of-way required by APS for any portion of the extension which is either on premises owned, leased or otherwise controlled by Applicant, or other property required for the extension, shall be conveyed to APS (in APS' standard Utility Easement form attached hereto) by Applicant without cost to or condemnation by APS and in reasonable time to meet proposed service requirements. Applicant shall provide APS access to these distribution facilities at all times, and shall not block or interfere with said access in any way, including fencing or the placement of obstructions adjacent to and on the door-side of cabinets, transformers, or any other equipment.
  - 1.4 All meters are to be located as shown on the sketch, a copy of which is attached to this Agreement. No variation to the meter locations identified may be made unless approved in writing by an authorized representative of APS.
  - 1.5 Applicant's "on and off" site construction required in support of APS' construction is estimated to begin on \_\_\_\_\_\_\_ and to be completed on \_\_\_\_\_\_\_ contingent upon scheduled completion of Applicant's "on and off" site construction in accordance with APS' specifications. The dates of APS' construction are provided only as estimates, are not binding upon APS, and are subject to change to accommodate APS' workload, material requirements, or other factors.
- 2. PAYMENT

APS shall not schedule or begin any construction pursuant to this Agreement until it receives from Applicant a payment of \_\_\_\_\_\_ DOLLARS, which sum equals the estimated installation cost to APS of extending service to Applicant, as set forth in this Agreement. This payment shall include all costs for the facilities, and shall be due to APS upon Applicant's execution of this Agreement. Upon completion of APS' construction, APS will establish its actual costs. If the actual costs differ from the amount paid by Applicant upon execution of this Agreement, APS will then bill Applicant or refund Applicant the difference, based on the results of the actual cost calculation.

#### 3. REFUNDS

If prior to the start of APS' construction, Applicant notifies APS in writing of Applicant's request to cancel this Agreement, Applicant shall be entitled to receive a refund of the amount paid less all fees and costs incurred by APS associated with the Agreement prior to cancellation.

#### 4. GENERAL PROVISIONS

- 4.1 This Agreement shall be binding upon and inure to the benefit of the heirs, administrators, executors, or assignees of the parties to this Agreement, provided, however, that no assignment or other transfer of this Agreement shall be binding upon APS or create any rights in Applicant's assignee until such assignment or other transfer is approved and accepted in writing by an authorized representative of APS.
- 4.2 All electric facilities installed pursuant to this Agreement shall be owned by APS.
- 4.3 APS may use the installed facilities to serve other customers, and may extend service to other customers from the facilities located within the rights-of-way and easement(s) conveyed to APS pursuant to this Agreement.
- 4.4 This Agreement does not require APS to construct any line extensions to future customers not included in the attached sketches.
- 4.5 If Applicant fails to complete its "on and off" site construction requirements in support of APS' construction within six months of the estimated date of completion for said Applicant construction, as set forth in Section 1.5 hereof, APS shall have the right to revise the payment amount required pursuant to Section 2 hereof which Applicant will be required to pay prior to APS proceeding with construction or energizing its facilities.
- 4.6 The prevailing party in any proceedings instituted by either party regarding a dispute concerning this Agreement shall be entitled to recover its reasonable attorney's fees, costs, and expenses.
- 4.7 If any term or condition of this Agreement is held to be invalid, void, or otherwise unenforceable by any court of competent jurisdiction, that holding shall not affect the validity or enforceability of any other term or condition of this Agreement, unless enforcing the balance of this Agreement would deprive either party of a fundamental benefit of its bargain.
- 4.8 This Agreement constitutes the final and complete agreement between the parties for the construction of the line extension described herein and supersedes all prior and contemporaneous conduct, agreements, statements, representations, negotiations, course of conduct, course of dealing, and communications pertaining to the subject matter hereof, whether written or oral. The parties shall not be bound by or be liable for any statement, representation, promise, inducement, or understanding of any kind not set forth in or formally incorporated into this Agreement.

#### 5. ATTACHMENTS

The provisions, terms, and conditions of each of the following documents, attached to this Agreement, are hereby incorporated in full into this Agreement.

NOTE: Documents marked below are attached

\_\_\_\_ Design Sketches

- \_\_\_\_ Applicant Charges (Non-Refundable)
- Applicant Reimbursement Details

\_\_\_\_ Trenching Agreement – Requirements \_\_\_\_ Utility Easement

Sales Invoice

#### 6. EFFECTIVE DATE

This Agreement will become effective only upon the execution of this document by duly authorized representatives of the parties and payment by Applicant to APS of the total amount set forth in Section 2, and will be deemed effective as of the date signed by APS.

## ARIZONA PUBLIC SERVICE COMPANY

# APPLICANT or APPLICANT'S REPRESENTATIVE

Signature:	Signature:
Name:	Name:
Title:	Title:
Date:	Date:
APS Invoice #:	Mailing Address:
Prepared By:	
Design Agreement Payment	Permanent Phone #:
Date Received:	The individual executing this Agreement on
	behalf of Applicant represents and warrants:
Final Amount Paid \$	(i) that he or she is authorized to do so on
(Including Taxes)	full legal power and authority to hind
	Applicant in accordance with the terms
	herein and, if necessary, has obtained all
	required consents or delegations of such
	power and authority.
<b>X</b>	

## APPENDIX D

Form of Operating Agreement

## OPERATING AGREEMENT for the <u>Customer Name/Facility</u> <u>Photovoltaic/Synchronous/Induction</u> <u>Generator</u> Generating Facility

This Operating Agreement (the "Operating Agreement") for the Customer <u>Customer Name / Facility</u> Generating Facility located at <u>Generating Facility</u> <u>Address</u>, Arizona, is entered into as of the \_\_\_\_ day of \_\_\_\_, 2013, (the "Effective Date") by and between Arizona Public Service Company, an Arizona Corporation (hereinafter referred to as "APS") and <u>Customer Name</u> (hereinafter referred to as "Customer"), sometimes referred to individually as "Party" and collectively as "Parties."

#### **RECITALS**

- A. APS provides electric power through an electric distribution system (the "APS System") to its customers located in the APS electric service territory in Arizona. The APS Distribution Operations Center ("DOC") Distribution Operations Specialist ("DOS") is the APS operating authority for, and has control and operational jurisdiction over the APS System, up to the delivery point of electricity to its customers. This delivery point, also referred to as the Point of Common Coupling (the "POCC") is the physical location where APS' electric service conductors are connected to a customer's conductors, bus, or other service equipment and which is normally located in a customer's electric Service Entrance Section (SES).
- B. Customer has caused a \_\_\_\_\_\_ KW (nominal AC) <u>photovoltaic / synchronous / induction generator</u> Generating Facility (GF) to be installed at its <u>Customer Facility</u> ("Facility") which will operate in electrical parallel with the APS System. Such interconnection and parallel operation shall be undertaken in accordance with the terms set forth in Agreement/Schedule No. 21222, ("Interconnection Agreement/Schedule") executed between APS and Customer and pursuant to, and in accordance with and subject to the terms and conditions of the Master Agreement/Agreement for the Interconnection of Generating Facilities to the APS Distribution System (APS Agreement No. \_\_\_\_\_) between the Parties.
- C. APS provides electric service to Customer's Facility via the APS System in the form of three phase alternating current at approximately 60 Hz and 7,200/12,470 volts, serving Customer's primary metered SES identified as (ex: SES 1). The GF will be operated in electrical parallel with the APS System with the primary purpose of displacing power that otherwise would have been provided by APS.

- D. Customer will maintain and operate, or cause to be maintained and operated, all of its 12.47 kV electric equipment and electric distribution system at its Facility, (also called the "Customer System") which includes the GF and its associated Photovoltaic System Utility Disconnect Switch located in the Customer's SES.
- E. This Operating Agreement shall apply whenever either Party, or either Party's authorized representative, needs to work on its respective equipment and it is necessary to isolate (and suitably ground) the subject equipment from both the APS and Customer sources of power.

NOW, THEREFORE, in consideration of the above-referenced Recitals and the covenants and agreements set forth below, the Parties agree as follows:

- 1. The APS Distribution Operations Center ("DOC") Distribution Operations Specialist ("DOS") in Phoenix, Arizona is the APS operating authority for, and has control and operational jurisdiction over the APS System emanating from the APS substation. No other department or individual shall have operational jurisdiction over this equipment.
- 2. The APS operational jurisdiction shall end at the POCC located in the Customer's SES identified as (ex: SES 1). The POCC is the point where the APS-owned 12.47 kV utility feeder cables connect onto the Customer-owned electric bus. This is also referred to as the "Point of Interconnection" and is located within the Customer-owned Utility Metering and Termination Section in the Customer switchgear shown in Appendix A of the signed Interconnection Agreement/Schedule.
- 3. Customer has control and operational jurisdiction over its equipment beginning at the POCC and including the Photovoltaic System Utility Disconnect Switch referenced in paragraph D above, and all of the Facility electrical generation and distribution equipment.

# When Customer or Customer's authorized representative needs to work on the Customer System:

- 4. Customer or Customer's authorized representative (both of which, or either of which, will be the person referred to as the "Requesting Party" under this section of this Operating Agreement) understands that, in addition to an electrical source from the Facility photovoltaic generating equipment, there is also a source of electricity from APS to its Facility.
- 5. Requesting Party further understands that before it can work on its Facility electrical lines or other equipment under its control and

operational jurisdiction, Requesting Party is required to ensure that the subject lines or equipment have been isolated from all known sources of electricity and suitably grounded when and as necessary. Depending on where the work is to be performed, this may include Requesting Party requesting, and receiving, authorization from APS to ensure that the APS source of power to the Facility has been isolated. This authorization is known as an APS "Special Work Request for Third Parties–Authorization".

- 6. For the purpose of this Operating Agreement, an APS "Special Work Request for Third Parties - Authorization" is defined as: A statement by the authorized APS representative in charge at the job location that APS has completed protective actions to establish a safe working area, and a description of the limits and conditions of that safe working area as related to APS sources of power (hereinafter referred to as a "Special Work Authorization").
- 7. When Requesting Party needs APS to disconnect (or isolate) it's source(s) of electricity to the Facility so that Requesting Party can safely work on the Customer System, Requesting Party will contact the APS DOC at the phone number given in the "Contact Information and General Terms" section of this document to schedule the APS work to de-energize or re-energize the APS source of electricity to the Facility.
- 8. Any work request by Requesting Party for APS to de-energize or reenergize the APS source of electricity to the Facility for other than an emergency condition must be scheduled through the APS DOC and coordinated with Requesting Party three (3) days prior to APS starting such work.
- 9. APS will send a qualified APS representative ("APS Representative") to the Facility who will isolate APS' source(s) of power to the Facility and establish a safe working area as related to the APS source(s) of power in accordance with APS' procedure for obtaining a Special Work Authorization.
- 10. The APS Representative will meet with the Requesting Party to explain the protective actions taken by APS in accordance with APS' Special Work Authorization, including, but not limited to, reviewing the Requesting Party's responsibilities and ensuring Requesting Party understands them, explain the condition of APS' feeder and the physical boundaries or limits of the authorized safe working area, ask the Requesting Party if there are any questions pertaining to the information provided and if Requesting Party has a full understanding of such.

- 11. The APS Representative will ensure that the Special Work Request is completed and signed by both APS and Requesting Party, and provide Requesting Party with a copy of the Special Work Request.
- 12. Requesting Party is responsible to electrically isolate the GF and any other sources or potential sources of power from the subject lines and equipment that it desires to work on, and to install grounds as applicable.
- 13. When Requesting Party has finished work on its subject lines and/or equipment, it will notify the APS DOC or APS Representative, as the case may be, that it has concluded its work, that any grounds have been removed, and all personnel, tools and related equipment are clear of the work area, and that Requesting Party requests APS to reenergize Customers lines and equipment.
- 14. The APS Representative, if not at the job location, will proceed to the job location in order to re-energize the Facility lines and equipment. The APS Representative will have Requesting Party complete and sign an "APS Release of Special Work Request for Third Parties Authorization".
- 15. For the purpose of this Operating Agreement, an "APS Release of Special Work Request for Third Parties Authorization" is defined as: a statement by the Requesting Party who received the Special Work Authorization that all personnel, tools and related equipment are clear of the area covered by the Special Work Authorization, and that Requesting Party will consider the area covered by the Special Work Authorization to be re-energized and will not return to work in that area without first receiving another Special Work Authorization for that area (hereinafter referred to as "Release of Special Work Authorization").

# When APS Needs to Work on the APS System or APS-owned Metering Equipment located in Customer's SES:

16. When APS needs Customer to disconnect (or isolate) all of its sources or potential sources of electric power or electrical back-feed from the Customer's Facility from the APS System, in order to establish a "Safe Working Area" for APS personnel, the APS DOC will contact Customer at the phone number given in the "Contact Information and General Terms" section of this document. The APS DOC will schedule a time with the Customer for an APS Representative to meet Customer or Customer's authorized representative at the job location in order for Customer to establish, or cause to be established, a Safe Working Area, and take a planned electrical outage to Customer's Facility if required.

- 17. APS is responsible for establishing any required electrical clearance(s) in order to de-energize (and ground if required) that part of the APS System that needs to be electrically isolated from all sources or potential sources of APS power.
- 18. Customer shall identify all equipment in its Facility required to implement suitable isolation point(s) in order to establish a Safe Working Area for APS personnel. Customer shall meet with the APS Representative on site to explain its isolation procedure(s). Any questions shall be resolved to the satisfaction of the both Parties.
- 19. Customer will provide qualified personnel, along with proper tools and related equipment at the job location, who will establish a Safe Working Area as described above by isolating all Customer sources or potential sources of power and electrical back-feed to the APS System, including the APS metering equipment, and ground the APS side of the Customer's isolation point(s) if so directed by the APS Representative. Unless otherwise agreed to by both Parties, such isolation point(s) will be the visual open, lockable (and groundable if so required) disconnect device or devices (normally a visual open switch or rack-out circuit breaker) identified in the diagrams attached to the executed Interconnection Agreement/Schedule.
- 20. After Customer has established, or cause to be established, the Safe Working Area to APS' satisfaction, the APS Representative will install an APS lock and personal tag on the Customer equipment. In order to establish clearance points on the APS System, the APS Representative will contact the APS DOC for the purpose of obtaining an electrical clearance from all known APS sources of electricity.
- 21. Neither Customer nor Customer's representative shall remove, change or alter the personal tags, locks or equipment associated with the Safe Working Area without the prior notification and proper authorization to do so by the APS Representative on site.
- 22. When APS has completed its work on its lines or equipment, the APS Representative on the job location will notify Customer or Customer's representative that APS is ready to energize the APS electrical service to the Customer System. The APS Representative will proceed to remove the APS lock and personal tag from the Customer's equipment.
- 23. Customer will confirm to the APS Representative on the job location that any Customer-installed grounds have been removed, that all Customer personnel and tools are in the clear, and that the Customer System is ready to be energized.

- 24. Following Customer confirmation that it is ready for APS to energize the Customer System, the APS representative will ensure that any APS installed grounds are removed, and will then request a release of the APS clearance from the APS DOC, inform the APS DOC that all shorts and grounds have been removed, and that the APS line feeding the Customer Facility is ready to be energized.
- 25. Following energizing of the APS line feeding the Customer Facility, the APS Representative will inform the Customer or Customer's representative that the electric service to the Customer Facility is energized and that Customer may proceed to close its isolation point(s) as it sees fit.

#### **Contact Information and General Terms**

- 26. All emergency work requests will be handled directly by the APS DOS at the APS DOC, and the Customer or Customer representative on duty at the time of the emergency.
- 27. Contact for all work requests during normal business hours and in the case of an emergency will be:
  - APS: Distribution Operations Center (24 hour Operating Center) at (602) 371-6037.
  - Customer Contact: <u>Customer Name, Title,</u> at <u>Phone No</u>. (24 hour primary contact).
  - Customer Contact: <u>Customer Name, Title</u>, at <u>Phone No</u>. (24 hour backup contact).
- 28. If there is ever any misunderstanding or confusion regarding a) whether equipment is energized or de-energized, or b) as to any steps to be taken in the process of energizing or de-energizing any equipment, then the Party that is experiencing the misunderstanding or confusion shall not proceed, and shall immediately ask the other Party for additional information to discuss the situation and resolve any issues that are impacting the completion of the operations.
- 29. Each Party shall maintain on file a current copy of this Operating Agreement, along with a copy of the Interconnection Agreement and associated diagrams. These documents will be kept so as to be readily accessible to the Parties and contact persons/entities listed above for implementation of any operations or other work to be performed under this Operating Agreement.

#### Customer Agreement # \_\_\_\_\_\_ kW

30. If any pertinent information contained in this Operating Agreement relating to a Party changes, such as contact names, telephone numbers, updated diagrams or procedures, etc., it shall be that Party's responsibility to contact the other Party in order to update this Operating Agreement.

IN WITNESS WHEREOF, the Parties have caused this Operating Agreement to be executed by their duly authorized representatives as of the Effective Date hereinabove set forth.

ARIZONA	PUBLIC	SERVICE	COMPANY
			A0000

Signature
Name
Title
Date
CUSTOMER NAME
Signature
Name
Title
Date