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

Customer's First and Last Name

APS AGREEMENT NO. APP ID NUMBER

ADDRESS _____

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APPENDICES

<u>APPENDIX IIA DISCLAIMER FORM:</u> POSSIBLE FUTURE RULES and/or RATE CHANGES AFFECTING YOUR ROOFTOP PHOTOVOLTAIC SYSTEM.

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

Customer's First and Last Name

1. PARTIES

This Agreement for the interconnection of Customer's Generation Facility to the APS Distribution System (hereinafter referred to as "Agreement" or "Interconnect Agreement") is entered into as of the day the system passes inspection (the "Effective Date") by and between ARIZONA PUBLIC SERVICE COMPANY, an Arizona corporation (hereinafter called "APS") and CUSTOMER, (hereinafter called "Customer"). APS and Customer are hereinafter sometimes referred to individually as "Party" and collectively as "Parties".

2. RECITALS

The following facts and considerations 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 site address listed on the application (the "Property.")
- 2.3 The specifications of the GF are accurate after the Interconnection Application is approved.
- 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.

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 Agreement: 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 Appendices, and other exhibits attached hereto and incorporated herein by specific reference.
- 4.2 Advanced Metering Infrastructure (AMI) Device (also referred to as an "Automated Meter"): 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 APS Interconnection Requirements (also referred to as the "APS IRDG"): 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 http://www.aps.com/library/solar%20renewables/InterconnectReq.pdf and incorporated herein.
- 4.4 The APS System (also referred to as APS's System): Refers to APS's electric transmission or distribution system.
- 4.5 Bi-Directional Meter: 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.
- 4.6 Cogeneration Facility: 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.
- 4.7 Customer: 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.
- 4.8 Disconnect Device: A Disconnect Switch or a rack-out circuit breaker acceptable to APS to electrically isolate the Customer's GF from the APS System.
- 4.9 Disconnect Switch: 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.
- 4.10 ESRM: APS's Electric Service Requirements Manual, available at http://www.aps.com/esrm and incorporated herein.
- 4.11 Generating Facility (GF) (also sometimes referred to as a Distributed Generation 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 Generator: 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 NRTL: A Nationally Recognized Testing Laboratory certified by OSHA to perform a particular test standard or standards.
- 4.15 OSHA: Occupational Safety and Health Administration. See www.osha.com.
- 4.16 Point(s) of Interconnection: The physical location(s) where APS's service conductors are connected to Customer's service conductors or bus to allow parallel operation of Customer's GF with the APS System.
- 4.17 Property Has the meaning set forth in Section 2.2.
- 4.18 Qualifying Facility (QF): 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.
- 4.19 Readily Accessible: Capable of being reached quickly and conveniently on a 24-hour basis, pursuant to Section 2 of the APS Interconnection Requirements, without requiring climbing over or removing obstacles, or obtaining permission, keys or security clearances.
- 4.20 Rotating Machine: An induction or synchronous machine used to generate electric power.
- 4.21 Service Entrance Section (SES): 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.

- 4.22 Small Power Production Facility: A facility that uses primarily biomass, waste, or renewable resources, including wind, solar, and water to produce electric power.
- 4.23 Static Inverter: An electronic device used to convert direct current (DC) power into alternating current (AC) power.
- 4.24 Termination Obligations: has the meaning set forth in Section 4.
- 4.25 UL: Underwriters Laboratories Inc. See www.ul.com.

5. <u>EFFECTIVE DATE AND TERM</u>

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 15 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

- 6.1 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 Disconnect Switch. 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.
- 6.2 All Generating Facilities other than those comprising a Backup Generator must include a system dedicated kWh meter, or meters, (the "Performance Meter"), which measures the energy production of the Generator(s). The Performance Meter must be installed in compliance with the APS Electric Service Requirements Manual (ESRM) Section 300, which is available on APS' website, and must be installed so as to record the AC energy output produced by the Generator.

APS may, at its discretion and expense, replace a Customer-installed Performance Meter with an APS-owned Performance Meter for system monitoring purposes.

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: Renewable Energy Delivery - MS 8049 P.O. Box 53999 Phoenix, AZ 85072-3999

Telephone: (602) 328-1924 Email: renewables@aps.com

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 incorporated herein constitute the entire Agreement between the Parties relating to the subject matter hereof. In the event of a conflict among the provisions of this Agreement and an attached or incorporated 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:
 - 8.2.1 <u>APPENDIX IIA DISCLAIMER FORM:</u> POSSIBLE FUTURE RULES and/or RATE CHANGES AFFECTING YOUR ROOFTOP PHOTOVOLTAIC SYSTEM.
- 8.3 The Parties may amend this Agreement only by written instrument signed by both Parties.

9. CUSTOMER'S OBLIGATIONS

- 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 Customer shall own and be fully responsible for the costs of designing, installing, operating and maintaining:
 - 9.2.1 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, and the terms and conditions of this Agreement.
 - 9.2.2 Control and protective devices, in addition to the Minimum Protective Devices, Relays and 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.

Customer shall install, or cause to be installed, and will maintain the following Minimum Protective Devices and Relays on the GF:

- .2.2.1 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.
- .2.2.2 Such other equipment as specified in this Agreement, or as may mutually be agreed upon by the Customer and APS from time to time during the term of this Agreement and any extensions thereof.
- 9.2.3 An acceptable visibly open and lockable isolation point will be provided and installed 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 load break Disconnect Device and shall be capable of being locked in a visibly "open" position by a standard APS padlock, and shall be installed in a Readily Accessible place so as to provide easy and unrestricted accessibility to APS personnel. APS shall have the right to lock open the Disconnect Device without notice to Customer, or require Customer to lock open the Disconnect Device (i) when interconnected operation of the GF with the APS System could adversely affect the APS System, or endanger life or property, or (ii) upon termination of this Agreement.

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.

- 9.2.4 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 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 third parties' systems or equipment, such as but not limited to computer, telephone, communication and other sensitive electronic or control systems.
- 9.4 Customer shall exercise reasonable care to assure that the electrical characteristics of its load and its GF, such as deviation from sine wave form or unusual short interval fluctuations in power demand or production, do not result in impairment of service to other APS 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 net load, as measured at the Point of Interconnection, shall not be less that 90% lagging, but shall not be leading, unless agreed to in writing in advance by APS.
- 9.5 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.
- 9.6 Prior to the installation of its GF, Customer shall submit to APS, for APS review and written acceptance, written equipment specifications, and detailed plans of the interconnection facilities, control and protective devices and settings, and facilities as specified in the APS Interconnection Requirements, as may be revised from time to time, for the design, installation and operations of its GF.

- 9.7 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 acceptance of APS.
- 9.8 If Customer utilizes the APS System to facilitate start-up of its GF, the voltage flicker level shall not exceed APS standards in effect during the term of this Agreement, as such standards may be modified from time to time.
- 9.9 Customer shall, at the time of the APS site inspection, perform a shutdown test of the inverter(s) to ensure that they shut down upon simulated loss of the utility source.
- 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.
- 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 9; 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.

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.

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.

- 10.3 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.
- 10.4 If, at any time, APS in its sole discretion believes that operation of any of the GF protective and switching apparatus may impair the operation of the APS' System, then Customer shall promptly demonstrate, to APS' reasonable satisfaction, the correct calibration and operation of the equipment in question.

If Customer is unable to demonstrate the correct calibration and operation of the equipment to APS's reasonable satisfaction, APS may immediately and without prior notice disconnect or cause Customer to immediately disconnect the GF from the APS System (including by opening the Disconnect Switch).

- 10.5 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.
- 10.6 Notwithstanding any other provisions of this Agreement, APS shall have the right to unilaterally file with the Arizona Corporation Commission (the 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. 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.

12. EFFECT OF SECTION HEADINGS

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

13. 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.

14. GOVERNING LAW

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.

15. EVENTS OF DEFAULT

A Party shall be in default under this Agreement in the event of a breach of any term or condition under the Agreement which breach is not cured within five (5) business days after receipt of written notice of such breach.

16. SEVERABILITY

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 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.

17. INSURANCE

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 13, Indemnity hereof.

18. 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:			
"Customer":			
Signature:			
Name:			
Date Signed:			



APPENDIX IIA

DISCLAIMER

POSSIBLE FUTURE RULES and/or RATE CHANGES AFFECTING YOUR ROOFTOP PHOTOVOLTAIC SYSTEM

The following is a supplement to paragraph 10.6 of the Interconnection Agreement you signed with the Arizona Public Service Company (APS).

- 1. APS electricity rates, basic charges and service fees are subject to change. Future adjustments to these items may positively or negatively impact any potential savings or the value of your rooftop photovoltaic system.
- 2. You will be responsible for paying any future increases to electricity rates, basic charges or service fees from APS.
- 3. Your rooftop photovoltaic system is subject to the current rates, rules and regulations established by the Arizona Corporation Commission ("Commission"). The Commission may alter its rules and regulations and/or change rates in the future, and if this occurs, your system is subject to those changes.
- 4. Any future electricity rate projections presented to you are not approved by APS or the Commission. They are based on projections formulated by external third parties not affiliated with APS or the Commission.

By signing below, you acknowledge that you have read and understood the above disclaimer.

Signed,	
Print Name	By signing this disclaimer, you confirm your understanding that the economics behind your decision to buy or lease solar may change. You
Signature	are signing up for a long-term agreement with a third-party NOT affiliated with APS, whose numbers are based on their own predictions about rates and policies that are
Date	subject to change.