

CITY OF UKIAH

PHOTOVOLTAIC INTERCONNECTION AGREEMENT FOR NET ENERGY METERING FROM SOLAR ELECTRIC GENERATING FACILITIES OF 1 KW (KILOWATT) TO 100 KW

DECLARATIONS

_____ (“Customer-Generator”), and the City of Ukiah, referred to collectively as “Parties” and individually as “Party, consistent with, and in order to effectuate, the provisions of Section 2827 of the California Public Utilities Code and the City of Ukiah’s applicable electric rate schedules enter into this “Photovoltaic Interconnection Agreement for Net Energy Metering From Solar Electric Generating Facilities of 1 kW to 100 kW”. This Agreement applies to the Customer-Generator’s generating facilities identified below with the specific characteristics and generating capacity, and does not allow interconnection or operation of facilities different than those described. Accordingly, the Parties agree as follows:

1. DESCRIPTION OF CUSTOMER-GENERATOR’S SOLAR ELECTRIC GENERATING FACILITY (Facility):

A. Project Identification Number: _____.
(Utility Log Number)

B. Interconnected Equipment:

Table 1 – List of generating equipment interconnected with the City of Ukiah Electric Utility with an inverter (List the information requested below for all inverters interconnected with the City of Ukiah Electric Utility’s distribution system. If more than one generator shares the inverter, write, “Shared” on the same line as that generator under the manufacturer column and do not enter the inverter rating. Attach list of additional equipment if applicable.)

	PV Array Rating (watts)	Manufacturer for Inverter used with PV Array	Inverter Model Number	Inverter Rating (watts)
1				
2				

Table 2 – List of generating equipment interconnected with the City of Ukiah Electric Utility without an inverter.

(List the information requested below for all generators directly interconnected without an inverter to the City of Ukiah Electric Utility's distribution system. Attach list of additional equipment if applicable.)

	PV Array Rating (watts)	Manufacturer for Inverter used with PV Array	Inverter Model Number	Inverter Rating (watts)
1				
2				

C. Site Address: _____

D. Facility will be ready for operation on or about _____.
(Date)

E. Location of City of Ukiah Designated Switching: _____

F. Location of City of Ukiah Customer Contact: _____

G. Operating Option

Customer-Generator has elected to operate its solar-electric generating facility in parallel with the City of Ukiah's distribution facilities. The solar-electric generating facility is intended primarily to offset part or all of the Customer-Generator's own electric requirements.

Customer-Generator shall not commence operation of the Facility until the City of Ukiah Electric Utility has given written approval of the interconnection facility.

2. CUSTOMER BILLING AND PAYMENT OPTIONS

Customer-Generator's electric rate schedule shall remain the same. Summer and winter times are the same as the current rate schedule definitions. Customer-Generator may (at its option) pay any amount for electric utility charges monthly, with the understanding that any and all payments will be reconciled annually as set forth herein. At the end of every twelve (12) month period following the date of final interconnection of the Customer-Generator's PV system, the City of Ukiah will calculate the Customer-Generator's charges for any net-energy consumption as defined in the Customer-Generator's electric rate schedule. The Customer-Generator's total payments for the twelve (12) months will then be subtracted from the total charges. The Customer-Generator will then be billed for any balance due.

3. INTERRUPTION OR REDUCTION OF DELIVERIES

A. The City of Ukiah shall not be obligated to accept or pay for and may require Customer-Generator to interrupt or reduce deliveries of as-available energy: (a) when necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any

of its equipment or part of its system; or (b) if it determines that curtailment, interruption, or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices, or system operation.

- B. Whenever possible, the City of Ukiah shall give Customer-Generator reasonable notice of the possibility that interruption or reduction of deliveries may be required.
- C. Notwithstanding any other provisions of the Agreement, if at any time the City of Ukiah determines that either (a) the facility may endanger the City of Ukiah personnel, or (b) the continued operation of Customer-Generator's facility may endanger the integrity of the City of Ukiah's electric system, the City of Ukiah shall have the right to disconnect Customer-Generator's facility from the City of Ukiah's electrical system. Customer-Generator's Facility shall remain disconnected until such time as the City of Ukiah is satisfied that the condition(s) referenced in (a) or (b) of this Section 4.C have been corrected.

4. INTERCONNECTION

- A. Customer-Generator shall deliver the as-available energy to the City of Ukiah at the utility's solar bi-directional watt-hour meter.
- B. Customer-Generator shall pay for designing, installing, operating, and maintaining the solar-electric generating facility in accordance with all applicable laws and regulations and shall comply with the City of Ukiah's Appendix A, which is attached hereto.
- C. The City of Ukiah shall furnish and install standard watt-hour and bi-directional watt-hour meters. Customer-Generator shall provide and install meter sockets, related equipment and installation costs.
- D. Customer-Generator shall not commence parallel operation of the generating facility until written approval of the interconnection facilities has been given by the City of Ukiah. Such approval shall not be unreasonably withheld. The City of Ukiah shall have the right to have representatives present at the initial testing of Customer-Generator's protective apparatus.

5. MAINTENANCE AND PERMITS

Customer-Generator shall: (a) maintain the solar-electric generating facility and interconnection facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, the City of Ukiah's Appendix A, and (b) obtain any governmental authorization and permits required for the construction and operation of the solar-electric generating facility and interconnection facilities. Customer-Generator shall reimburse the City of Ukiah for any and all losses, damages, claims, penalties, or liability it incurs as a result of Customer-Generator's failure to obtain or maintain any governmental authorization and permits required for construction and operation of Customer-Generator's generating facility. The City of Ukiah will have the right to inspect and test the automatic disconnect circuit on periodic basis to insure proper operation defined in Appendix A.

6. ACCESS TO PREMISES

The City of Ukiah may enter Customer-Generator's premises: (a) to inspect at all reasonable hours Customer-Generator's protective devices and read or test meter; and (b) to disconnect, without notice, the interconnection facilities if, in the City of Ukiah's opinion, a hazardous condition exists and such immediate action is necessary to protect person's, or the City of Ukiah's facilities, or property of others from damage or interference caused by Customer-Generator's solar-electric facilities, or lack of properly operating protective devices.

7. INDEMNITY AND LIABILITY

- A. The Customer-Generator shall protect and defend the City against any claim for money made against the City, if the claim is based on any act or omission of the Customer-Generator in performing under this Agreement, regardless of whether the act or omission involves allegedly negligent or intentionally wrongful conduct, or if the claim results from the engineering, design, construction, maintenance, repair, improvement, replacement, operation, supervision, testing or ownership of the Customer-Generator's facility. Collectively, these activities will be referred to in this Agreement as "operation of the facility". The Customer-Generator will protect the City and its officers, agents, employees, and contractors. This obligation applies to the acts or omissions of the Customer-Generator's officers, agents, employees, contractors, and volunteers.

In addition, the Customer-Generator shall pay any loss of expense incurred by the City caused by the operation of the Customer-Generator's facility.

Under its obligation to defend the City, the Customer-Generator shall provide at its expense such attorneys, investigators, consultants, experts or other professionals as may be necessary to defend any such claim or demand and shall pay all expenses associated with such defense, including any expenses incurred by the City to assist or participate in such defense. If Customer-Generator fails to provide competent representation when necessary to prevent any prejudice to the City's interests, the City may retain such services and incur such expenses as may be reasonably prudent to protect its interest and Customer-Generator shall pay any such expenses incurred by the City within 30 days of the date the City provides the Customer-Generator with written notice of the expense and a demand for payment.

In agreeing to indemnify City under this paragraph 7.A, the Customer-Generator shall pay any settlement or judgment resulting from a claim, demand, and cause of action or suit covered by this paragraph. The Customer-Generator will not be required to protect the City against a claim that is based on the sole active negligence of the City or its officers, agents, employees, or contractors (other than the Customer-Generator).

The City will provide this same protection to the Customer-Generator for any claim based on the operation of the City's facilities, or the sole and active negligence of the City or its officers, agents, employees or contractors (other than the Customer-Generator) in operating its facilities.

This indemnification and hold harmless provision of this Agreement shall remain in effect, even if the Agreement is otherwise terminated or fully performed.

- B. Notwithstanding the indemnity of Section 7.A and except for a Party's willful misconduct or sole negligence, each Party shall be responsible for damages to its facilities resulting from electrical disturbances or faults.
- C. The provisions of this Section 7 shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.
- D. Except as otherwise provided in Section 7.A, neither Party shall be liable to the other Party for consequential damages incurred by that Party.
- E. If Customer-Generator fails to comply with the insurance provisions of this Agreement, if any, Customer-Generator shall, at its own cost, defend, save harmless and indemnify the City of Ukiah, its directors, officers, employees, agents, assignees, and successors in interest from and against any kind or nature (including attorney's fee and other costs of litigation) resulting from the death or injury to any person or damage to any property, including the personnel property of the City of Ukiah, to the extent that the City of Ukiah would have been protected had Customer-Generator complied with all such

insurance provisions. The inclusion of this Section 7.E is not intended to create any express or implied right in Customer-Generator to elect not to provide any such required insurance.

8. INSURANCE

- A. To the extent that Customer-Generator has currently in force all risk property insurance and comprehensive personal liability insurance, Customer-Generator agrees that it will maintain such insurance in force for the duration of this Agreement in no less amounts than those currently in effect. The City of Ukiah shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operation.
- B. Customer-Generator shall meet the standards and rules set forth in Appendix A, have the appropriate liability insurance required in Section 8.A and shall not be required to purchase any additional liability insurance.
- C. Such insurance required in Section 8.A shall, by endorsement to the policy or policies, provide for thirty (30) calendar days written notice to the City Electric Utility prior to cancellation, termination, alteration, or material change of such insurance.

9. GOVERNING LAW

This Agreement shall be interpreted, governed, and construed under the laws of the State of California as if executed and to be performed wholly within the State of California.

10. AMENDMENT, MODIFICATION OR WAIVER

Any amendment or modifications to the Agreement shall be in writing and agreed to by both Parties. The failure of any Party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any party of the breach of any term of covenant contained in this Agreement, whether by conduct or otherwise, shall be deemed to be construed as a further or continuing waiver of any such breach or a waiver of breach of any other term or covenant unless such waiver is in writing.

11. APPENDIX

This Agreement includes the following Appendix A, which is attached and incorporated by reference:

Appendix A: City of Ukiah's Photovoltaic Interconnection Standards.

12. NOTICES

All written notices shall be directed as follows:

City of Ukiah
Electric Utility Department
411 W. Clay
Ukiah, CA 95482

Customer-Generator's notice to the City of Ukiah pursuant to this Section 12 shall refer to the Project Identification Number set forth in Section 1.A

13. TERM OF AGREEMENT

This Agreement shall be in effect when signed by the Customer-Generator and the City of Ukiah and shall remain in effect thereafter month-to-month unless terminated by either Party on thirty (30) days' prior written notice in accordance with Section 12.

14. ADDITIONAL REQUIRED DOCUMENTS

In addition to this signed Interconnection Agreement, the following documents must be submitted to the City of Ukiah Electric Utility:

- Completed Building Permit Application
- Copy of rebate approval letter
- One signed copy of the interconnection agreement
- Application for residential/commercial utility service
- W-9 Internal revenue service (if a commercial installation)
- Four copies of plans – 2 wet signed
- 8 ½ X 11 plot plan
- Two sets of truss calculations or engineered calculations if required
- PV system design and electrical one-line drawing

15. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives.

This Agreement is effective as of the last date set forth below.

(Customer-Generator)

City of Ukiah

By: _____
Name: _____
Title: _____
Date: _____

By: _____
Name: _____
Title: _____
Date: _____

APPENDIX A

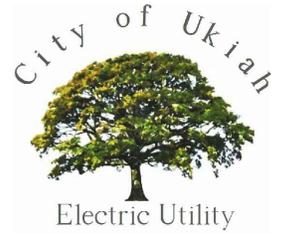
PHOTOVOLTAIC INTERCONNECTION STANDARDS FOR RESIDENTIAL SOLAR ELECTRIC GENERATION FACILITIES OF 10 KW OR LESS

A. General

This Appendix sets forth the requirements and conditions for interconnected non-utility owned, solar-electric generation where such generation may be connected for parallel operation with service of the Utility. For purpose of this Appendix, the interconnecting entity shall be designated Customer-Generator.

B. Design Requirements

1. Customer-Generator shall conform to applicable National Electric Code (NEC) Standards (NEC 690) and applicable building codes.
2. Customer-Generator shall have a dedicated circuit from the inverter to service panel with a circuit breaker or fuse (NEC 690-64(B)(1)).
3. Customer-Generator's over-current device at the service panel shall be marked to indicate photovoltaic power source (NEC 690-64(B)(4)).
4. The Customer-Generator's inverter shall have the following minimum specifications for parallel operation with the Utility:
 - a. Inverter output shall automatically disconnect from Utility source upon loss of Utility voltage and not reconnect until Utility voltage has been restored by the Utility (NEC 690-61).
 - b. Inverter shall automatically disconnect from the Utility source within two cycles if Utility voltage fluctuates beyond 10% plus or minus.
 - c. Inverter shall automatically disconnect from the Utility source within three cycles if the Utility frequency fluctuates one (1) cycle plus or minus.
 - d. Inverter output distortion shall meet IEEE 519 standards.



CITY OF UKIAH

SOLAR GENERATION 1KW TO 100KW

CERTIFIED COMPONENTS:

A nationally recognized testing laboratory must certify all the components in a residential or commercial cogeneration system. These certifications are to include but are not limited to the following:

1. Photovoltaic modules shall meet the requirements of the Underwriters Laboratory (UL) Standard 1703.
2. Inverters shall meet the requirements of UL 1741.
3. Overall system design and individual component specifications shall be in accordance with California Electric Code Book (CEC) Article 690.

GRID TIE METERING:

Grid Tie Metering is available for generation systems 1KW to 100kW. Grid Tie Metering will be provided by the City in accordance with the established city policy. After the customer has paid the appropriate fee, the City of Ukiah will set Meters rated for the voltage supplied and calibrated to read power flow in both directions. Billing will be in accordance with the established City of Ukiah Electric Rate Schedule.

LOCKABLE FUSED DISCONNECT:

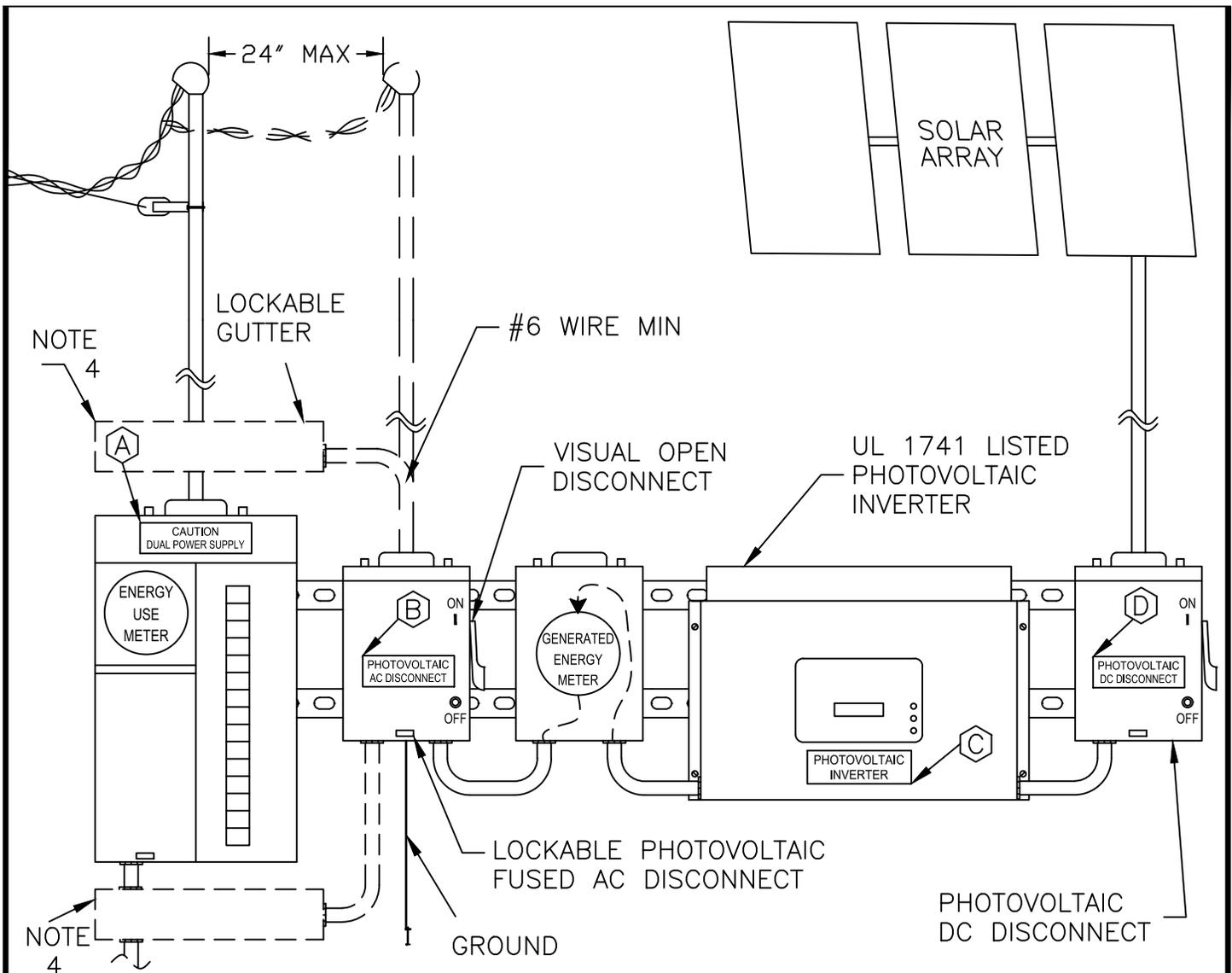
A lockable fused disconnect device shall be installed between the alternate energy source and the Service Entrance Panel. Fuse rating to match conductor ampacity. This disconnect must be within 10' of the Service Entrance Panel and must be accessible to the City at all times.

LABELING:

Generation systems must be labeled in accordance with the requirements of this standard. All labels shall be affixed in a permanent manner appropriate to the installed device.

Drawing name: C:\Users\sbozzol\AppData\Local\Temp\AcPublish_4468b\Grid Tie 1 kW to 100kW.dwg Plotted: Jun 15,2015 - 4:25pm

CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT				ENGINEERING STANDARD GENERATION METERING GRID TIE METERING 1KW TO 100KW		
3-5-15	SB	SB			SHEET 1 OF 3	SV 0201
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION SB	



NOTES:

1. LOCKABLE FUSED AC DISCONNECT TO BE ACCESSIBLE TO CITY OF UKIAH AT ALL TIMES AND SHALL BE MOUNTED WITHIN 10' OF THE SERVICE ENTRANCE PANEL.
2. LABELING (A), (B), (C), (D), PER SHEET 3 OF 3.
3. ALL ELECTRICAL CONSTRUCTION MUST MEET CITY OF UKIAH MUNICIPAL CODES, NEC CODES, AND ANY APPLICABLE STATE AND FEDERAL CODES.
4. OPTION AVAILABLE FOR BOTH OH & UG. SEALABLE SERVICE GUTTER 8"x8"x16" MINIMUM. POLARIS CONNECTORS TO BE USED FOR UNDERGROUND CONNECTIONS.
5. CUSTOMER TO PROVIDE ALL MATERIALS FOR METER INSTALLATION COSTS. CITY OF UKIAH TO PROVIDE METERS. CITY TO CONNECT TO WEATHER HEAD, FROM WEATHER HEAD TO CUSTOMER OWNED EQUIPMENT IS CUSTOMER RESPONSIBILITY.

Drawing name: C:\Users\sbozzol\appdata\local\temp\AcPublish_4468\Grid Tie 1 kW to 100kW.dwg Plotted: Jun 15, 2015 - 4:25pm

<h1 style="text-align: center;">CITY OF UKIAH</h1> <p style="text-align: center;">ELECTRIC UTILITY DEPARTMENT</p>				ENGINEERING STANDARD		
				GENERATION METERING GRID TIE METERING 1KW TO 100KW		
3-5-15	SB	SB			SHEET 2 OF 3	SV 0201
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION SB	

LABELS SHOWN AT MINIMUM SIZE

A

**CAUTION
DUAL POWER SUPPLY**

B

**PHOTOVOLTAIC
AC DISCONNECT**

C

**PHOTOVOLTAIC
INVERTER**

D

**PHOTOVOLTAIC
DC DISCONNECT**

NOTES:

1. LABELS SHALL BE MADE OF RED PLASTIC MATERIAL WITH ENGRAVED WHITE LETTERS.
2. "PHOTOVOLTAIC BREAKER" LETTERS TO BE $\frac{1}{8}$ " MINIMUM IN HEIGHT, ALL OTHER LETTERING TO BE $\frac{1}{4}$ " MINIMUM IN HEIGHT.

Drawing name: C:\Users\sbozzol\appdata\local\temp\AcPublish_4468b.Grid Tie 1 kW to 100kW.dwg Plotted: Jun 15,2015 - 4:25pm

CITY OF UKIAH ELECTRIC UTILITY DEPARTMENT				ENGINEERING STANDARD GENERATION METERING GRID TIE METERING 1KW TO 100KW		
3-5-15	SB	SB			SHEET 3 OF 3	SV 0201
DATE	DRAWN	DESIGNED	CHECKED	APPROVAL	REVISION SB	