



**Interconnection Agreement for
Renewable Energy Net Metering
(Photovoltaic)**

**Between
Colorado Springs Utilities
And**

(Customer)

This Interconnection Agreement (Agreement) for Renewable Energy Net Metering (Photovoltaic) is entered into on _____, 2009 (Effective Date) by and between _____ (Customer), _____ (address), and Colorado Springs Utilities (Springs Utilities), an enterprise of the City of Colorado Springs, a Colorado municipal corporation and home-rule city.

RECITALS

A. Renewable Energy Net Metering Service is available to Springs Utilities' Customers that are supplied electric service by Springs Utilities under any rate schedule and that own, operate and maintain an eligible Renewable Energy System in parallel with Springs Utilities' electric system.

B. The Customer owns an eligible Renewable Energy System and will install and maintain it in compliance with all applicable National Electric Code requirements, building codes, and Springs Utilities' Tariff and Electric Line & Extension Service Standards.

C. The Customer desires to connect the eligible Renewable Energy System to Springs Utilities' electric system.

D. Springs Utilities has mechanisms in place through its Electric Tariff to accommodate the Customer's request.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained within this Agreement, the parties agree as follows:

AGREEMENT

1. SYSTEM DEFINED

The Customer's eligible Renewable Energy System is a self-contained photovoltaic electric generation system comprising: photovoltaic modules, direct current disconnect apparatus, inverter for the conversion of direct current to alternating current, recording

meter socket (the recording meter is supplied by Springs Utilities), alternating current disconnect/lockout, over-current protective device, and all other related electrical equipment upstream of the over-current protective device (all such equipment described as the “System” within this Agreement). The System begins and continues up-stream from the over-current protective device on the Customer’s premises. However, the recording meter, itself, does not form part of the System and at all times remains the property of Springs Utilities; the meter socket and related electrical connects are part of the System and are the responsibility of the Customer.

2. TERM AND TERMINATION

2.1 The term of this Agreement begins on the Effective Date (regardless of the date that the Customer is authorized to interconnect the System pursuant to Section 5 below) and continues for five (5) consecutive 12-month periods, and then will renew for additional 12-month periods.

2.2 The Customer may terminate this Agreement at any time by providing 30 days written notice of termination to Springs Utilities. In the event of a sale of the Customer’s premises, then this Agreement will terminate upon that sale.

2.3 Spring Utilities may terminate this Agreement at any time for any violation of this Agreement by providing written notice to the Customer. As provided in Section 3 below, this Agreement is at all times subject to the terms of, changes to, and revisions to, Springs Utilities’ Tariff and other related regulatory authorizations.

2.4 At the time of termination of this Agreement for any reason, Springs Utilities will perform lock out procedures to disconnect the Customer’s System from Springs Utilities’ electric system.

3. TARIFF AND REGULATORY AUTHORITIES

3.1 Renewable Energy Net Metering Service (Service) is available to Springs Utilities’ Customers that are supplied electric service by Springs Utilities under any rate schedule and that own, operate and maintain an eligible Renewable Energy System in parallel with Springs Utilities’ electric system.

3.2 This Agreement is subject to: 1) all present and future applicable laws, rules, regulations, certificates, decisions, orders and directives of all federal, state and local authorities having jurisdiction over the subject matter of this Agreement; and 2) Springs Utilities’ Tariff, as amended from time to time. Springs Utilities may file and may seek City Council approval from time to time to change the terms of its Tariff and to place such changes into effect. This Agreement will be deemed to include all such changes referred to in the initial sentence of this subsection, or any other changes that become effective by operation of law or City Council resolution, without prejudice to the Customer’s right to protest those changes.

4. INSTALLATION AND PERMITTING

4.1 The Customer and the System must comply with: 1) all applicable National Electric Code (NEC) requirements, including, but not limited to NEC Articles 690 and 705; 2) all building codes; and 3) all applicable Underwriters Laboratories (UL) requirements and standards. At its sole expense, the Customer must: 1) obtain all necessary electrical permit(s) for the installation of the System, and 2) obtain and maintain any governmental authorizations or permits required for the operation of the System. The Customer must reimburse Springs Utilities for any and all losses, damages, claims, penalties, or liability Springs Utilities incurs as a result of the Customer's failure to obtain or to maintain any governmental authorizations and permits required for construction and operation of the Customer's System.

4.2 The Customer or its contractor must construct the System as specified in the attached Exhibit A.

4.3 A manual, lockable, load-break disconnect switch that provides a clear indication of the switch position must be available with the System at or near the Customer's main point of service from Springs Utilities' electric system to provide a point of electrical separation between the Customer's System and Springs Utilities' electric system. Springs Utilities will coordinate and approve the location of the disconnect switch. The disconnect switch must be easily visible, mounted separately from the metering equipment, readily accessible to Springs Utilities' personnel at all times, and capable of being locked in the open position with a Springs Utilities' lock. Springs Utilities may open the disconnect switch thereby isolating the Customer's System from the Springs Utilities' electric system for any reason that Springs Utilities deems necessary (including, but not limited to, maintenance or emergency work, the System adversely affecting other customers of Springs Utilities, failure of the System to comply with codes/regulations, the System creating hazardous or unsafe conditions, the Customer's failure to pay utility bills when due, failure to comply with UL Standard 1741 (*Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems*), or failure to comply with UL Standard 1703 (*Standard for Safety: Flat-Plate Photovoltaic Modules and Panels*)).

4.4 Springs Utilities requires a second (recording) metering point to record energy generated by the Customer's System. At its sole expense, the Customer must furnish and install as part of the System a meter socket (base) in accordance with Springs Utilities' Electric Line & Extension Service Standards. Springs Utilities will furnish the meter for insertion into that meter socket (base) at no charge to the Customer. This second meter will have no affect on the Customer's utility bill and is for informational purposes.

4.5 The System must comply with all Institute of Electrical and Electronics Engineers (IEEE) Standards 929-2000 (*Recommended Practice for Utility Interface of Photovoltaic Systems*), as of the Effective Date, for parallel operation with Springs Utilities. The purpose of these IEEE Standards is to minimize custom engineering of many aspects of the interconnection. These standards allow installation in a manner that will allow the System to perform as expected and to be installed at a reasonable cost while not

compromising safety or operational issues. All power quality parameters (that is, voltage, flicker, frequency, distortion) are specified at the point of common coupling (PCC) unless otherwise stated. In particular, the following requirements must be met:

- 4.5.1 Voltage – the System must be capable of operating within normal voltage operating limits of 106-132 volts (88-110% nominal 120V). This range results in trip points at 105 V and 133 V. Response to abnormal voltages should be as follows:

<u>Voltage (at PCC)</u>	<u>Maximum trip time</u>
$V < 50\%$	6-cycles
$50\% < V < 88\%$	120-cycles
$88\% < V < 110\%$	normal operation
$110\% < V < 137\%$	120-cycles
$137\% < V$	2-cycles

- 4.5.2 Flicker – Any voltage flicker resulting from the connection of the inverter to Springs Utility’s electric system at the PCC cannot exceed the limits defined by the maximum borderline of irritation curve identified in IEEE Std. 519-1992.
- 4.5.3 Frequency – the System must have a fixed frequency range of 59.3-60.5 Hz.
- 4.5.4 Waveform Distortion – the System must have low current-distortion levels to ensure that no adverse effects are caused to other equipment connected to Springs Utilities’ electric system. The System electrical output at the PCC must comply with Clause 10 of IEEE Std. 519-1992. The key requirement is that total harmonic distortion must be less than 5% of the fundamental frequency current at rated inverter output. Each individual harmonic is limited to the percentages listed in IEEE Std. 519-1992.
- 4.5.5 Power Factor – The System must operate at a power factor > 0.85 (leading or lagging) when output is greater than 10%.
- 4.5.6 Islanding Protection – The System must cease to energize the utility line when the inverter is subjected to islanding conditions. The Customer’s System must immediately, completely and automatically disconnect from Springs Utilities’ electric system in the event of a fault on the Customer’s System, a fault on Springs Utilities’ electric system or loss of source on Springs Utilities’ electric system. Springs Utilities, at its own discretion and expense, may conduct periodic testing of anti-islanding.

4.6 The Customer’s over-current protective device (Breaker) at the service panel must be dedicated and must be capable of interrupting the maximum available fault current. The Breaker shall be clearly marked to indicate power source and connection to Springs

Utilities' electric system. Springs Utilities will provide and attach an additional label to the manual load-break disconnect switch, which is described in Subsection 4.3 above.

4.7 The Customer, at its own expense, must pay for any additional equipment required to connect the System to Springs Utilities' electric system.

5. WRITTEN AUTHORIZATION REQUIRED TO CONNECT SYSTEM

5.1 **The Customer may not connect the System to the Springs Utilities electric system until:** 1) this Agreement has been executed by the parties, 2) the System has been tested, and 3) written authorization to connect the System, in a form substantially similar to the attached Exhibit B, has been given to the Customer by Springs Utilities. Springs Utilities may have representatives present at the initial testing of the Customer's System and may perform (at its own expense) whatever testing of the Customer's System that Springs Utilities deems necessary.

5.2 After written authorization to connect the System to Springs Utilities' electric system has been given, the Customer shall make no changes or modifications in the System or of its mode of operation without the prior written approval of Springs Utilities.

6. LOCATION OF SYSTEM

The System will be installed at the Customer's premises located at _____ in the physical location specified or depicted in the attached Exhibit A. The Customer cannot relocate the System to another premises or physical location without the prior written approval of Springs Utilities. In the event that such approval is given, any relocation and installation of the System will be at the Customer's sole expense.

7. NET METERING AND BILLING

The term "Net Metering" as used within this Agreement has the same definition as contained within Springs Utilities' Tariff, Electric Rate Schedules. The Customer will be billed in accordance with the provisions of Springs Utilities' Renewable Energy Net Metering Rate Schedule for all energy delivered to and from the Springs Utilities' electric system.

8. RENEWABLE ENERGY CREDITS

The Customer expressly understands and agrees that all Environmental Attributes, including but not limited to, air quality credits, "Green tags," and renewable energy credits, that are created by the installation, existence and operation of the System shall belong to Springs Utilities. Springs Utilities may report or register ownership of the Environmental Attributes with any entity and may utilize those Environmental Attributes (or transfer them) in any manner.

9. ACCESS TO PREMISES

The Customer will allow access to its premises and to the System by Springs Utilities' personnel in accordance with the City of Colorado Springs City Code and Springs Utilities' Tariff: (i) to inspect the Customer's System, (ii) to read and to replace meters; (iii) to open the load-break disconnect switch, and (iv) to disconnect the interconnection facilities at Springs Utilities' meter or transformer.

10. MAINTENANCE OF EQUIPMENT

At its sole expense, the Customer will maintain the System, including but not limited to, all over-current protective equipment, in a safe and prudent manner and in conformance with all applicable laws, codes and regulations, including, but not limited to, the requirements of Section 4 above. The Customer must maintain all records for such maintenance. These records must be available to Springs Utilities for inspection at all reasonable times.

11. DISPUTE RESOLUTION

Should a dispute arise between the parties with regard to the Service provided under this Agreement, any such dispute may be reviewed and determined in accordance with the Dispute Resolution Procedure as provided in Springs Utilities' Tariff, Utilities Rules and Regulations.

12. SAFETY

The Customer agrees to install, to operate and to maintain the System in a safe and prudent manner and in conformance with all applicable laws, codes and regulations including, but not limited to, those contained within Section 4 above.

13. ASSIGNMENT

This Agreement may not be assigned by the Customer without the prior written consent of Springs Utilities, which may be withheld in its sole discretion. As provided in Section 2 above, in the event of a sale of the Customer's premises, then this Agreement will terminate upon that sale. If the new owner desires to continue receiving the Service, the new owner must enter into a new, separate agreement with Springs Utilities.

14. INDEMNITY AND LIABILITY

14.1 Whenever any liabilities are incurred by either or both of the parties for damages caused by injuries to either party (or their employees or agents) or the property of either party, or caused by injuries to other persons on the two parties' property arising out of the subject matter of this Agreement, then the liabilities for such damages between the parties will be as follows:

- 14.1.1 Each party will be liable for all damages because of injuries to persons or property caused solely by its negligence or solely by its failure to comply with this Agreement.
- 14.1.2 Each party will be liable for all damages to its own property that are caused by the concurrent negligence of both parties, or that are due to causes that cannot be traced to the sole negligence of the other party, to the extent of its negligence therefore.
- 14.1.3 Each party will be liable for all damages because of injuries to its itself or its own employees or agents that are caused by the concurrent negligence of both parties, or that are due to causes that cannot be traced to the sole negligence of either party; provided that in no event will a party be liable for damages because of injuries to itself or its own employees and agents in any amount in excess of applicable Workmen's Compensation insurance; and provided further that this Agreement will in no way impair the right of the injured party or its employee or agent to the extent that third party negligence proximately caused injuries or damages to party or its employee or agent.
- 14.1.4 In the event of claims brought to recover damages because of injuries to persons not employees of either party and because of injuries to property not belonging to either party that are alleged to be caused by the concurrent negligence or both parties or are alleged to be due to causes that cannot be traced to the sole negligence of either party, the parties agree to apportion said liabilities according to the principles of the Colorado Uniform Contribution Among Joint Tortfeasors Act, C.R.S. § 13-50.5-101, *et seq.*, and further agree that in the event of such concurrent or joint negligence that no right of indemnification will exist, so that in all such claims, the issues of liabilities will be determined as a matter of contribution and not as a matter of indemnity.

14.2 No provision of this Agreement shall be deemed or construed to be a relinquishment or waiver of any kind of the applicable limitations of liability provided Springs Utilities, the City of Colorado Springs, their officers, City Council, Utilities Board, directors, employees, agents and representatives by the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq.*

14.3 Neither party will have any liability whatsoever for any special, indirect, consequential or punitive damages.

15. FORCE MAJEURE

Neither party will be liable for delays in performing its obligations to the extent that the delay is caused by an unforeseeable condition beyond its reasonable control without fault or negligence, including but not limited to, strikes, riots, wars, floods, fires, explosions, acts of nature, acts of government, or labor disturbances.

16. APPROPRIATION OF FUNDS

In accord with the City of Colorado Springs' City Charter, performance of Springs Utilities' obligations under this Agreement is expressly subject to appropriation of funds by the City Council. In the event funds are not appropriated in whole or in part sufficient for performance of Springs Utilities' obligations under this Agreement, or appropriated funds may not be expended due to City Charter spending limitations, then this Agreement shall thereafter become null and void by operation of law, and Springs Utilities shall thereafter have no liability for compensation or damages to the Customer in excess of Springs Utilities' authorized appropriation for this Agreement or the applicable spending limit, whichever is less. Springs Utilities shall notify the Customer as soon as reasonably practicable in the event of non-appropriation or in the event a spending limitation becomes applicable.

17. SEVERABILITY

If any provision of this Agreement is found to be illegal or unenforceable, then the remaining provisions of this Agreement will remain in full force and effect, and such term or provision will be deemed stricken for as long as it remains illegal or unenforceable.

18. GOVERNING LAW

18.1 This Agreement will be construed in accordance with the laws of the State of Colorado, without reference to conflicts of laws; and the City of Colorado Springs City Charter, City Code, Ordinances, and Rules and Regulations.

18.2 In the event of any dispute over the Agreement's terms and conditions, the exclusive venue and jurisdiction for any litigation arising there under will be in the District Court of El Paso County, Colorado, and, if necessary for exclusive federal questions, the United States District Court for the District of Colorado. The Customer waives any objection to jurisdiction and venue of any action instituted pursuant to this Section 18 and may not assert any defense in any such action based on lack of jurisdiction or venue or based upon *forum non conveniens*. The Customer waives any bond or surety or security upon such bond or surety which, but for this waiver, might be required of Springs Utilities.

18.3 The Customer waives personal service of any and all process upon it, and consents that all such service of process may be made by registered or certified mail or messenger directed to it as provided in Section 20 below. Nothing contained within this Section 18 affects the right of Springs Utilities to serve legal process in any other manner permitted by law.

19. SURVIVAL

The provisions of this Agreement with respect to indemnification and liability will survive the termination of this Agreement.

20. NOTICES AND OTHER COMMUNICATIONS

Except as otherwise expressly provided in this Agreement or as may be specified by the parties in writing, any notice or other communication required under this Agreement must be in writing and must be sent by registered or certified United States mail, or by messenger, or by facsimile, or by other electronic means. Any such notice or other communication must be addressed as follows and, if so addressed, will be effective upon actual receipt.

If to Customer:	Name:	_____
	Title:	_____
	Address:	_____

	Phone:	_____
	Fax:	_____
	Email:	_____

If to Springs Utilities:	Name:	Valencia Wright
	Title:	Contract Administrator
	Address:	111 S.Cascade Ave, MC1025
		Colorado Springs, CO 80903
	Phone:	719-668-3807
	Fax:	719-668-8188
	Email:	vwright@csu.org

21. ENTIRE AGREEMENT

This Agreement, together with its attachments, constitutes the entire agreement between the parties and supersedes all previous written or oral communications, understandings, and agreements between the parties unless specifically stated otherwise within this Agreement. This Agreement may only be amended by a written agreement signed by both parties. Email and all other electronic (including voice) communications from Springs Utilities in connection with this Agreement are for informational purposes only. No such communication is intended by Springs Utilities to constitute either an electronic record or an electronic signature or to constitute any agreement by Springs Utilities to conduct a transaction by electronic means. Any such intention or agreement is expressly disclaimed.

22. ACKNOWLEDGEMENTS REGARDING AGREEMENT

By signing below, the Customer acknowledges that it understands the terms of this Agreement and that the Customer may not connect the System to Springs Utilities' electric system until the Customer has received written authorization to connect from Springs Utilities. Within 60 days after notice from the Customer that the System is ready for interconnection to the Springs Utilities electric system, Springs Utilities will inspect the System and will provide a written authorization to connect the System or a statement that the System may not be interconnected because of non-compliance with this Agreement.

THE DULY AUTHORIZED REPRESENTATIVES of the parties have signed three originals of this Agreement.

CUSTOMER

Signature: _____

Printed Name: _____

Address: _____

Utilities Account #: _____

Date: _____

COLORADO SPRINGS UTILITIES

Authorized Signature: _____

Printed Name: _____

Title: _____

Date: _____

Exhibit A

to the Interconnection Agreement for Renewable Energy Net Metering (Photovoltaic) between Colorado Springs Utilities and _____, dated _____.

Insert description of System, this may be taken from rebate application

Exhibit B

to the Interconnection Agreement for Renewable Energy Net Metering (Photovoltaic) between Colorado Springs Utilities and _____, dated _____.

Section A: Authorization. The System may be connected to the Colorado Springs Utilities electric system.

The System has been inspected and tested and the Customer is authorized to connect the System to the Colorado Springs Utilities electric system.

Signed by:

Printed Name:

Printed Title:

Date:

– OR –

Section B: Non-Authorization. The System cannot be connected to the Colorado Springs Utilities electric system.

The System does not comply with the Interconnection Agreement for Renewable Energy Net Metering (Photovoltaic) between Colorado Springs Utilities and _____, dated _____. Accordingly, the Customer **cannot connect** the System to the Colorado Springs Utilities electric system.

Signed by:

Printed Name:

Printed Title:

Date:
