



## Agreement for parallel connection of a medium sized photovoltaic generator with the City of Lakeland's Electric Distribution System

This Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, by and between, the City of Lakeland, Florida, a Florida municipal corporation (the "City") and \_\_\_\_\_ (the "Customer"), whose address is \_\_\_\_\_ (the "Property").

Whereas, the City endeavors to encourage the development of electric power generation using renewable fuels; and

Whereas, the Customer desires to construct and/or operate a photovoltaic array connected in parallel with the City's power distribution system (hereafter "System") through the Customer's connection to the meter at or on the Property; and

Whereas, there are electrical safety, power quality, and other issues with such an installation.

Now, therefore, for and in consideration of the mutual covenants and agreements the parties hereby agree as follows:

1. The City agrees that the photovoltaic generator, as specified in the attached "**Application and Compliance Form For Medium PV Systems 500 KW or Less**" may be connected in parallel with the distribution system once the following condition are met;
  1. The Customer and the City have signed this agreement.
  2. The installation is in compliance with all provisions in the attached Appendix A, hereby made a part of this document.
  3. The "**Application and Compliance Form For Medium PV Systems 500 KW or Less**" document is completed and signed by the appropriate Electrical Inspector and the City.
  4. Appendix B has been signed by both parties.
2. This Agreement applies solely to Customer's PV system at or on the Property.
3. Prior to operation, the City reserves the right to inspect the PV system installation to ensure compliance with the standards and codes noted in Appendix A. If the City chooses to exercise this option, it agrees to inspect and, if the system is in compliance, provide written approval of the interconnection (using the Application and Compliance Form) within ten (10) working days following the request for

inspection and approval. Parallel operation of the photovoltaic system with the grid shall not begin without the City's approval.

4. The City reserves the right to refuse to accept electric power from the PV system under extreme conditions as described below. If the City chooses to exercise this option, which may involve physically disconnecting the City's System from the PV system, it agrees to make reasonable efforts to notify the Customer when such conditions exist or are anticipated to exist, and to reconnect when the adverse conditions no longer exist. Examples of conditions that may lead to disconnection include:
  - a. City System emergencies and/or maintenance requirements,
  - b. Hazardous conditions existing on the PV system or its protective equipment,
  - c. Adverse effects of the PV system's operation on the City System, or on other City customers, or
  - d. Failure of the PV system to comply with regulations, rules, orders or decisions of any government or regulatory authority having jurisdiction over the City, generating equipment or operation.
5. If the kWh delivered to the City System exceeds the kWh delivered to the Customer's load in a billing cycle, a credit for the net kWh delivered to the City's system shall be carried forward to the next billing cycle. Credits may accumulate and be carried forward for a moving 12 month period. The moving 12 month period is defined as ending in the current billing cycle and starting same month last year plus one month. In no event shall the Customer be paid for excess energy delivered to the City System at the end of the 12 month moving period.
6. The customer acknowledges that there may be green energy attributes, called Tradable Renewable Energy Credits, which are derived from the energy generated by these systems. The Customer agrees that the City retains full rights and ownership to these credits.
7. City reserves the right to terminate this Agreement with or without cause with 30 calendar days written notice.
8. Any material default of this Agreement by the Customer shall allow City to immediately terminate this Agreement and disconnect the Customer's PV system from City's System.
9. The Customer agrees to immediately notify City in writing if the Customer:
  - a. Sells the Property.
  - b. Makes a change to the PV system.
  - c. Sells the PV system or a portion thereof.
  - d. Performs maintenance on the PV system that may have an impact on the City's System.

Notice should be sent to:

Jeff Curry, Alternative Energy Coordinator  
Lakeland Electric  
501 East Lemon Street  
Lakeland, FL 33801  
Phone (863) 834-6853  
Jeff.Curry@lakelandelectric.com

10. Insurance and Indemnification. The Customer shall provide proof of and maintain at all times a general liability insurance policy for personal and property damage in the amount of at least \$100,000. A standard business policy in at least this amount may meet this requirement. Customer shall properly execute the Indemnification Agreement in the exact form as attached as Appendix B and deliver it the City upon submitting the Application set forth below.

By \_\_\_\_\_ Date: \_\_\_\_\_  
Customer

By \_\_\_\_\_ Date: \_\_\_\_\_  
City

## APPENDIX A

### INTERCONNECTION REQUIREMENTS FOR MEDIUM PHOTOVOLTAIC SYSTEMS 500 KW OR LESS

#### A. Definitions

1. A **medium photovoltaic (PV) System** is a solar electric generator with an array rating of greater than 10 kW and less than or equal to 500 kW or less under standard operating conditions (SOC) of 1000 watts/m<sup>2</sup> solar irradiance, nominal operating cell temperature, air mass 1.5, and ASTM standard solar spectrum.
2. In no case shall the size of the photovoltaic system exceed 75 percent of the capacity of the transformer bank between the customer's PV generator and the City's System.
3. An **inverter**, also referred to as a *power conditioner*, is a dc to ac device that converts PV energy to ac energy for utility interconnection. The inverter contains many control functions, such as voltage and frequency monitoring and protection against islanding. These Interconnection Requirements apply only to static inverters. Rotating devices cannot be used.

#### B. Standards and Codes

1. **Inverter(s)**. The inverter(s) must be listed and in compliance with Underwriters Laboratories (UL) Subject 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems. Utility-interactive inverters that pass the tests of the new UL 1741 standard will be, by definition, "non-islanding" inverters and will comply with all elements of the IEEE 1547-2003 interconnection standard. The 1999 National Electrical Code requires that all utility-interactive photovoltaic systems use listed inverters that pass UL 1741.
2. **PV Modules and Panels**
  - a. PV modules and panels must be listed and be in compliance with Underwriters Laboratories (UL) Standard 1703, Standard for Safety: Flat-Plate Photovoltaic Modules and Panels.
  - b. PV modules must be in compliance with *IEEE Standard 1262-1995, IEEE Recommended Practice for Qualification of Photovoltaic (PV) Modules* (or, equivalently, IEC 61215).
3. **System Installation**. The installed system must be in compliance with: a) *IEEE 1547-2003, Standard for Interconnecting Distributed Resources with Electric Power Systems* and b) all relevant articles of the *1999 National Electrical Code* (or subsequent revisions).
4. **External Disconnect Switch**. The City requires a manual, lockable, load break utility-interface disconnect switch between the output of the photovoltaic inverter and the Customer's wiring connected to the City of Lakeland's electric distribution system. The load break device shall be both visible and accessible to Lakeland's

employees. Customer hereby grants a full license to access the Property and the PV system to ensure compliance herewith.

5. **Testing of Protective Relays.** City reserves the right to test the anti-islanding features and the power output quality of the inverter.
6. **PV System Equipment Protection.** It is the responsibility of the Customer to protect its generating equipment, inverters, protection devices, and other system components from damage by the normal conditions and operations that occur on the part of City in delivering and restoring System power. City hereby disclaims any liability whatsoever for damage to the Customer's equipment.
7. **Metering Arrangements.** The PV Inverter output will be connected, by the Customer, to the Customer side of the normal service meter through an External Disconnect Switch. The normal service meter shall be replaced with a meter that will measure and register power flowing into the Customer's property and measure and register power flowing from the customer's resource into the City System. The utility may, at its option, install a second meter to register the total output of the solar PV generator. This meter will be read monthly by the meter readers; however, it will be a non-billing meter.

**APPLICATION AND COMPLIANCE FORM  
FOR MEDIUM PV SYSTEMS 500 KW OR LESS**

<b>A. Applicant Information</b>	
Customer Name _____	Telephone # _____
Mailing Address _____	Email _____
City _____, FL _____	ZIP Code _____
Service address if different from mailing address _____	City _____
City account number _____	
<b>B. Photovoltaic System Information</b>	
System Name/Model: _____	
Array DC Power at SOC in watts _____	
Array manufacturer and model _____	
Inverter manufacturer and model _____	
Batteries (if applicable) _____	
Array location _____	
Inverter location _____	
AC Disconnect Location _____	
<b>C. Installation Contractor Information</b>	
Installation contractor name _____	FL license # _____
Contractor address _____	City, State, ZIP _____
Contractor phone _____	
Proposed installation date _____	
<b>D. Hardware and Installation Compliance</b>	
1.. The system hardware is in compliance with Underwriters Laboratories (UL) <i>Standard 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems</i> and <i>UL 1703, Standard for Safety: Flat-Plate Photovoltaic Modules and Panels</i> , and <i>IEEE 1262-1995, IEEE Recommended Practice for Qualification of Photovoltaic (PV) Modules</i> .	
2. The system has been installed in compliance with <i>IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems</i> and the <i>1999 National Electrical Code (NEC)</i> .	
Contractor signature _____	Date _____
Print name _____	

**E. Owner Acknowledgment**

The system has been installed to my satisfaction and I have been given system warranty information, and an operation manual. Also, I have been instructed in the operation of the system.

\_\_\_\_\_

Owner signature

\_\_\_\_\_

Date

**F. Utility Approval and Electrical Code Inspection**

PV Installation Satisfies THE CITY OF LAKELAND Interconnection Requirements

\_\_\_\_\_

CITY OF LAKELAND Representative Name (Print):

\_\_\_\_\_

CITY OF LAKELAND Representative Signature:

\_\_\_\_\_

Date

PV Installation Satisfies Code Requirements

\_\_\_\_\_

Inspector Name (Print)

\_\_\_\_\_

Inspector Signature

\_\_\_\_\_

Date

**APPENDIX B**  
**HOLD HARMLESS/INDEMNIFICATION**

To the fullest extent permitted by laws and regulations, Customer shall defend, indemnify, and hold harmless the City, its officers, directors, agents, guests, invitees, and employees from and against all claims, damages, losses, and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising out of or resulting from any acts of commission, omission, negligence, recklessness or intentional wrongful misconduct of the Customer, or any other person or organization directly or indirectly employed by the Customer to perform or furnish any of the work or anyone for whose acts any of them may be liable.

In any and all claims against the City, or any of its officers, directors, agents, or employees by any employee of the Customer, or any other person or organization directly or indirectly employed by the Customer to perform or furnish any of the work or anyone for whose acts any of them may be liable, this indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Customer or any other person or organization under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts, nor shall this indemnification obligation be limited in any way by any limitation on the amount or type of insurance coverage provided by the City, or the Customer.

**Applicability:** It is the express intent of the Customer that this agreement shall apply for the project indicated below:

**Parallel connection of a photovoltaic generator with the City of Lakeland's Electric Distribution System**

**Savings Clause:** The parties agree that to the extent the written terms of this Indemnification conflict with any provisions of Florida laws or statutes, in particular Sections 725.06 and 725.08 of the Florida Statutes, the written terms of this indemnification shall be deemed by any court of competent jurisdiction to be modified in such a manner as to be in full and complete compliance with all such laws or statutes and to contain such limiting conditions, or limitations of liability, or to not contain any unenforceable, or prohibited term or terms, such that this Indemnification shall be enforceable in accordance with and to the greatest extent permitted by Florida Law.

\_\_\_\_\_  
Name of Organization

**BY:** \_\_\_\_\_  
Signature of Owner or Officer

**ATTEST:** \_\_\_\_\_  
Corporate Secretary or Witness

