



**Agreement for Parallel Connection of a Photovoltaic Generator
with Franklin Power & Light's Electric Distribution System by a Residential
Customer**

This agreement is made and entered into this _____ day of _____, 20____, by _____ and _____ between the City of Franklin, Virginia d/b/a Franklin Power & Light (FP&L) and _____ (Customer), whose address is _____ (Property).

Whereas, FP&L 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 FP&L's power distribution system (hereafter "System") through the Customer's main switchboard or panel on Customer's Property; and

Whereas, there is 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. FP&L agrees that the photovoltaic generator, as specified in the attached "**Application and Compliance Form For PV Systems**" may be connected in parallel with the distribution system under the following conditions:
 - a. The Customer and FP&L have signed this agreement.
 - b. The installation is in compliance with all provisions in the attached Appendix A, hereby made a part of this document.
 - c. The "**Application and Compliance Form For PV Systems**" document is completed and signed by the appropriate parties, including the name of the jurisdiction and person performing the electrical inspections and FP&L.
 - d. The installed capacity of this installation, when combined with the installed capacity of all other renewable generators on the FP&L system, does not exceed 1% of the FP&L peak demand for the previous year.
2. This Agreement applies solely to Customer's PV system on Customer's Property.
3. Prior to operation, FP&L reserves the right to inspect the PV system installation to ensure compliance with the standards and codes noted in Appendix A. If FP&L 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 FP&L's approval.
4. The Interconnection Customer shall test and inspect its Generating Facility and Interconnection Facilities prior to interconnection. The Interconnection Customer shall notify the FP&L of such activities no fewer than five Business Days (or as may be agreed to by the Parties) prior to such testing and inspection. Testing and inspection shall occur on a Business Day, unless otherwise

agreed to by the Parties. FP&L may, at its own expense, send qualified personnel to the Generating Facility site to inspect the interconnection and observe the testing. The Interconnection Customer shall provide FP&L a written test report when such testing and inspection is completed and prepared by the person performing the testing.

5. FP&L reserves the right to refuse to accept electric power from the PV system under extreme conditions as described below. If FP&L chooses to exercise this option, which may involve physically disconnecting FP&L'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. FP&L 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 FP&L's System, or on other FP&L customers, including but not limited to voltage regulation, harmonic distortion, DC injection, etc. or any other effect that will jeopardize the integrity of FP&L's distribution system.
 - d. Failure of the PV system to comply with regulations, rules, orders or decisions of any government or regulatory authority having jurisdiction over FP&L, generating equipment or operation of PV System.
6. If the power output (kW) of the customer generation exceeds the load (kW) of the customer premises at any time during a billing cycle, the resulting energy (kWh) returning to FP&L's system will be netted against the energy (kWh) consumed by the customer during that same billing cycle at a rate equal to the simple average of FP&L's avoidable cost of energy, including fuel, and as adjusted from time to time. If during a billing cycle the netted amount is a credit, this energy will be carried forward and applied to the usage in the next billing cycle. If no energy is used or the net result is a credit, the customer will pay the Basic Customer Charge for the billing period.
7. 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. FP&L agrees that the Customer retains full rights and ownership to these credits.
8. FP&L reserves the right to terminate this Agreement with cause with 30 calendar days written notice.
9. Any material default of this Agreement by the Customer shall allow FP&L to immediately terminate this Agreement and disconnect the Customer's PV system from FP&L's System.
10. The Customer agrees to immediately notify FP&L 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 FP&L's System.

Notice should be sent to:

Zach Wright Power & Light
City of Franklin
1050 Pretlow St.
Franklin, VA 23851
Phone (757) 562-8568

11. Insurance

The Customer shall provide proof, at time of application, and maintain at all times a general liability insurance policy for personal and property damage in the amount of at least \$100,000 naming the City of Franklin, Virginia an additional insured. A standard residential policy in at least this amount may meet this requirement.

12. Indemnification

The Customer shall at all times indemnify, defend and save the City of Franklin, Virginia harmless from any and all damages, losses, claims, including claims and actions relating to injury or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney's fees, and all other obligations by or to third parties, arising out of or resulting from the Customer's action or inaction of its obligations hereunder.

By: _____ Date: _____
Customer

By: _____ Date: _____
Franklin Power & Light

APPENDIX A

INTERCONNECTION REQUIREMENTS FOR PHOTOVOLTAIC SYSTEMS

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 2005 National Electric Code requires that all utility-interactive photovoltaic systems use listed inverters that pass UL 1741. Inverters supplied as a part of the interconnection system shall not supply fault current to the FP&L system or continue to energize the FP&L system in the event of a fault.
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).
 - c. FP&L requires control drawings and final test reports on the installation/start up.
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 *2005 National Electric Code* (or subsequent revisions).
4. **External Disconnect Switch.** FP&L requires a manual, lockable, load break utility-interface disconnect switch between the output of the photovoltaic inverter and the Customer’s wiring connected to FP&L’s electric distribution system. The load break device shall be both visible and accessible to FP&L’s employees. Customer hereby grants a full license to access the Property and the PV system to ensure compliance herewith.
5. **Transformer Loading.** In no case shall the size of the photovoltaic system exceed 100 percent of the capacity of the transformer bank between the Customer’s PV generator and FP&L’s System.
6. **Testing of Interface Equipment.** FP&L reserves the right to test the anti-islanding features and the power output quality of the inverter.
7. **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 FP&L in delivering and restoring System power. FP&L hereby disclaims any liability whatsoever for damage to the Customer’s equipment.
8. **Electrical One Line Diagram.** An electrical one-line drawing depicting the project equipment to be installed must be furnished by the customer and made a part of the interconnection report.

APPLICATION AND COMPLIANCE FORM FOR PHOTOVOLTAIC SYSTEMS

Section 1. Applicant Information

Name: _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Street Address: _____
City: _____ State: _____ Zip Code: _____
Phone Number(s): _____
Fax Number: _____ Email Address: _____
Facility Location (if different from above): _____
FP&L Account: _____
Proposed Interconnection Date: _____

Section 2. Generating Facility Information

Facility Owner and/or Operator Name (if different from Applicant): _____
Business Relationship to Applicant: _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Street Address: _____
City: _____ State: _____ Zip Code: _____
Phone Number(s): _____
Fax Number: _____ Email Address: _____
Generator Manufacturer and Model: _____
Rated Capacity in kilowatts: AC _____ DC _____
Inverter Manufacturer and Model: _____
Battery Backup (circle one): Yes No

Section 3. Vendor Certification

The system hardware is listed by Underwriters Laboratories to be in compliance with UL 1741.

Signed (Vendor): _____ Date: _____
Name (printed): _____ Phone Number: _____
Company: _____

Section 4. Electrician Certification

The system hardware is in compliance with Underwriters Laboratories (UL) *Standard 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems* and *UL 1703, Standard for Safety: Flat-Plate Photovoltaic Modules and Panels*, and *IEEE 1262-1995, IEEE Recommended Practice for Qualification of Photovoltaic (PV) Modules*.

The system has been installed in compliance with *IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems* and the *2005 National Electrical Code (NEC)*.

Signed (Licensed Electrician): _____ Date: _____

Name (printed): _____

License Number: _____ Phone Number: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Section 5. 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

Section 6. Utility Approval and Electrical Code Inspection

PV Installation Satisfies FP&L's Interconnection Requirements

FP&L Representative Name (Print)

FP&L Representative Signature Date

PV Installation Satisfies Code Requirements

Inspector Name (Print)

Inspector Signature Date

I hereby certify that, to the best of my knowledge, all of the information provided in this Notice is true and correct.

Signature of Applicant: _____ **Date:** _____