



Appendix B

MASON COUNTY PUD No.1

INTERCONNECTION STANDARDS

For Customer-Owned, Grid Connected

Electric Generating Systems of 100kW or Less

(Appendix B to & Net Energy Metering Interconnection Agreement)

A. General

This "Interconnection Standard for Customer-Owned, Grid Connected Electric Generating Systems of 100 Kilowatts or Less" sets forth the requirements and conditions for interconnected non-utility-owned electric generation where such generation may be connected for parallel operation with the electrical system of Mason County PUD No.1 (The PUD). Generating systems will be permitted to interconnect to the PUD's electric distribution system (15kV and below) only after a determination by the PUD that such interconnection will not interfere with the operation of the distribution circuit.

B. Interconnection Requirements

1. Customer shall comply with all the latest applicable National Electric Code (NEC) requirements [NEC Articles 690 and 705], NESC requirements, WAC requirements, building codes, and shall obtain electrical permit(s) for the equipment installation.
2. Customer shall provide space for metering equipment and meter base as per PUD requirements.
3. Customer's over-current device at the service panel shall be marked to indicate power source and connection to the PUD's distribution system.
4. The Customer shall assume the full responsibility for all maintenance of the generator and protective equipment and keeping of records for such maintenance. These records shall be available to the PUD for inspection at all times.
5. Customer's power production control system shall comply with NEC Articles 690 and 705; and applicable and current Institute of Electrical and Electronics Engineers (IEEE) Standards 929 for parallel operation with the PUD; in particular the:
 - a. Power output control system shall automatically disconnect from the PUD power source upon loss of PUD voltage and not reconnect until the PUD's voltage has been restored for at least five (5) minutes continuously.
 - b. Power output control system shall automatically initiate a disconnect from the PUD source within six (6) cycles if Customer's voltage falls below 60 Volts rms to ground (nominal 120 V rms base) on any phase.
 - c. Power output control system shall automatically initiate a disconnect from the PUD's system within two (2) seconds if the voltage rises above 132 Volts rms phase to ground or falls below 104 Volts rms phase to ground (nominal 120 V rms base) on any phase.
 - d. Power output control system shall automatically initiate a disconnect from the PUD's system within three (3) cycles for any reverse power flow condition.

6. Customer shall pay all costs associated with the design, installation, operation, and maintenance of the generation equipment on the customer's side of the meter. Customer shall describe how the protection devices will achieve compliance with the requirements of this policy.
7. Customer shall deliver the excess energy to the PUD at the customer's premises. The PUD will install and maintain a revenue meter capable of registering the bi-directional flow of electricity at the customer's premises at a level of accuracy that meets all applicable standards, regulations and statutes. At the option of the PUD, a separate meter may be installed to measure production of the renewable generation source. Customer shall pay for any meters.
8. Customer shall not commence parallel operation of the generation equipment until inspection and written approval of the interconnection facilities has been provided by the PUD. Such approval shall not be unreasonably withheld. The PUD shall have the right to have representatives present at the initial testing of the customer's protective apparatus, and shall retain the right to periodically inspect the facility to ensure that appropriate safety standards continue to be met.
9. Once in operation, Customer shall make no changes or modifications in the equipment, wiring, or the mode of operation without the prior written approval of the PUD.
10. **Solar Photovoltaic Equipment** shall be in compliance with Underwriters Laboratories (UL) 1741, *Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems*; UL 1703, *Standard for Safety: Flat-Plate Photovoltaic Modules and Panels*; and IEEE 1262-1995, *Recommended Practice for Qualification of Photovoltaic (PV) Modules*; and the solar system shall be installed in compliance with IEEE Standard 929-2000, *Recommended Practice for Utility Interface of Photovoltaic Systems*.

C. Safety

All Safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.269, the National Electrical Code (NEC), Washington Administrative Code (WAC) rules, the Washington Industrial Safety and Health Administration (WISHA) standard, PUD standards, and equipment manufacturer's safety and operating manuals.

D. Maintenance and Permits

It is the customer's responsibility to perform all required maintenance and to comply with all applicable codes and regulations of the appropriate jurisdictional authorities, including but not limited to the following:

- a. Customer shall maintain the electric generating system and interconnection facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, the PUD's Interconnection Standards.
- b. Customer shall obtain any governmental authorizations and permits required for the construction and operation of the electric generating system and interconnection facilities, including electrical permit.
- c. Customer shall reimburse the PUD for any and all losses, damages, claims, penalties, or liability it incurs as a result of Customer's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of Customer's generating system or failure to maintain Customer's facility as required in this Section.