



Customer Checklist for Utility Interconnection

NET METER CUSTOMERS

- 1.** Submit an application to the Utility
 - Electrical schematic drawing
 - Site plan with proposed meter location(s)
 - Provisions for a lockable visible disconnect
 - A non-refundable application fee
- 2.** Send application to:
Pend Oreille County PUD #1 ATTN: Key Accounts, PO Box 190, Newport WA 99156
or email to: information@popud.org
- 3.** A Customer Service Representative will call you to schedule an on-site meeting with a PUD Engineer.
- 4.** Receive written design approval from the Utility, including:
 - Net meter socket(s) specifications and location approval
 - Applicant's cost for Utility provided production meter(s) (Quote)
- 5.** Get an electrical permit from Washington State L & I (360-896-2300)
- 6.** Complete the installation of the electric generating system and meter socket(s)
- 7.** Receive approved inspections from a state electrical inspector
- 8.** Submit Certificate of Completion to Utility (Application Appendix B)
- 9.** Submit the Interconnection and Net Metering Agreements to the Utility
- 10.** Pay the Quote (Cost to customer would be detailed in the cost estimate letter in Step 4).
- 11.** Sign Line Extension Agreement -must be notarized
- 12.** Sign Easements (if applicable) -must be notarized
- 13.** Utility installs bi-directional meter

CUSTOMER INTERCONNECTION AGREEMENT



Revised: March 13, 2024

Interconnection Standards and Related Documents

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Section 1 - Purpose and Scope

- 1) The purpose of this Customer Interconnection Agreement is to establish the terms and conditions governing the interconnection of electric generating facilities with a maximum generating capacity of less than or equal to 100 kilowatts to the electric system over which the Public Utility District No. 1 of Pend Oreille County (District) has jurisdiction.
- 2) This agreement does not govern interconnection of generating facilities with generating capacities greater than 100 kW. Any generating facility that is larger than 100kW will be separately negotiated in accordance with the Energy Policy Act of 2005, Pub. L. No. 109-58 (2005) that amended section 111 (d) of the Public District Regulatory Policy Act (PURPA).
- 3) These rules are intended to be consistent with the requirements of chapter 80.60 RCW, Net Metering of Electricity, and to comply with provisions of the Energy Policy Act of 2005, Pub. L. No. 109-58 (2005) that amended section 111 (d) of the Public District Regulatory Policy Act (PURPA) relating to Net Metering (subsection 11) and Interconnection (subsection 15).
- 4) This agreement does not govern standby generators designed and used only to provide power to the customer when the District service is interrupted and that operate in parallel with the District system for less than 0.5 seconds both to and from emergency service.
- 5) This agreement governs the terms and conditions under which the Generator's facility will interconnect with, and operate in parallel with, the District's electric system. This agreement does not govern the settlement, purchase, or delivery of any power generated by the Applicant's generating facility.

Section 2 - Application of Rules

- 1) These rules include various requirements applicable to the District, the Applicant and the Generator.
- 2) These rules modify, if necessary, any existing interconnection rules of the District, including but not limited to, rules implementing chapter 80.60 RCW, Net Metering of Electricity.

Section 3 – Definitions

"Applicant" means any person, corporation, partnership, government agency, or other entity applying to interconnect a generating facility to the District's electric system pursuant to this chapter.

"Application" means the written notice provided by the Applicant to the District that initiates the interconnection process.

"Certificate of completion" means the form completed by the Applicant or Generator and the electrical inspector having jurisdiction over the installation of the facilities indicating completion of installation and inspection of the interconnection.

"Electric system" means all electrical wires, equipment, and other facilities owned or provided by the District that are used to transmit electricity to customers.

"Generating facility" means a source of electricity owned by the Applicant or Generator that is located on the Applicant's side of the point of common coupling, and all facilities ancillary and appurtenant thereto, including interconnection facilities, which the Applicant requests to interconnect to the District's electric system.

"Generator" means the entity that owns and/or operates the generating facility interconnected to the District's electric system.

"IEEE" means the Institute of Electrical and Electronics Engineers.

"Initial operation" means the first time the generating facility is in parallel operation with the electric system.

"In-service date" means the date on which the generating facility and any related facilities are complete and ready for service, even if the generating facility is not placed in service on or by that date.

"Interconnection" means the physical connection of a generating facility to the electric system so that parallel operation may occur.

"Interconnection facilities" means the electrical wires, switches and other equipment used to interconnect a generating facility to the electric system.

"Maximum generating capacity" means the maximum amount of energy that the Generation Facility is capable of producing on an instantaneous basis.

"Model interconnection agreement" means standardized terms and conditions that govern the interconnection of generating facilities pursuant to this agreement. The model interconnection agreement may be modified to accommodate terms and conditions specific to individual interconnections, subject to the conditions set forth in these rules.

"NEC" means the National Electrical Code.

"Net metering" means measuring the difference between the electric energy supplied by a District and the electric energy generated by a generating facility over the applicable billing period.

"Network distribution system (grid or spot)" means electrical service from a distribution system consisting of two or more primary circuits from one or more substations or transmission supply points arranged such that they collectively feed secondary circuits serving one (a spot network) or more (a grid network) District customers.

"Parallel operation" or **"operate in parallel"** means the synchronous operation of a generating facility while interconnected with a District's electric system.

"Point of common coupling" or **"PCC"** means the point where the generating facility's local electric power system connects to the District's electric system, such as the electric power revenue meter or at the location of the equipment designated to interrupt, separate or disconnect the connection between the generating facility and District. The point of common coupling is the point of measurement for the application of IEEE 1547, clause 4.

“Production metering” means measuring the total electric energy produced by an electric generating facility over the applicable billing period.

“System upgrades” means the additions modifications and upgrades to the District electrical system at or beyond the point of common coupling necessary to facilitate the interconnection of the generating facility. System Upgrades do not include interconnection facilities.

“UL” means the Underwriters’ Laboratory.

“District” means **Public Utility District No. 1 of Pend Oreille County**, which owns and operates the electrical distribution system, or the electrical distribution system itself, onto which the Applicant seeks to interconnect a generating facility.

Section 4 – Technical Standards for Interconnection

1) General interconnection requirements.

- a) Any generating facility desiring to interconnect with the District's electric system or modify an existing interconnection must meet all minimum technical specifications applicable, in their most current approved version, as set forth in this chapter.
- b) The Generation Facility must comply with all requirements from Table 1 that are applicable to the interconnection of that generating facility.
- c) Any single or aggregated generating facility with a capacity greater than 25 kW shall require a three-phase interconnection.

Table 1. 100 kW or Smaller.

	Single-Phase		Three-Phase	
	*Capacity			
<u>Feature</u>	≤ 25 kW Inverter based	≤ 25 kW Non-inverter based	≤ 100 kW Inverter based	≤ 100 kW Non-inverter based
IEEE 1547 compliant	√	√	√	√
UL 1741 listed	√		√	
Interrupting devices (capable of interrupting maximum available fault current)	√ [8]	√	√ [8]	√
Interconnection disconnect device (manual, lockable, visible, accessible)	√	√	√	√
System Protection	[9][5]	√ [3][4][6]	[9][5]	√ [3][4][5][6]

Over-voltage trip	√ [8]	√	√ [8]	√
Under-voltage trip	√ [8]	√	√ [8]	√
Over/Under frequency trip	√ [8]	√	√ [8]	√
Automatic synchronizing check		√		√
Ground over-voltage or over-current trip for District system faults.		√[2]		√ [2]
Power factor		√ [7]		√ [7]

Notes:

√ – Required feature (blank = not required)

* Capacity of single or aggregate generation

[1] – District may choose to waive this requirement.

[2] – May be required by the District; selection based on grounding system.

[3] – No single point of failure shall lead to loss of protection.

[4] – All protective devices shall fully meet the requirements of ANSI C37.90.

[5] – District will specify the transformer connection.

[6] – It is the customers’ responsibility to ensure that their system is effectively grounded as defined by IEEE Standard 142 at the point of common coupling.

[7] – Variance may be allowed based upon specific requirements per District review. Charges may be incurred for losses.

[8] - UL 1741 listed equipment provides required protection for inverter based generation.

[9] – Per UL Standard #1741 (“UL1741”) manufacturers must submit their equipment to a Nationally Recognized Testing Laboratory (“NRTL”), recognized by the United States Department of Labor, Occupational Safety & Health Administration (OSHA), that verifies compliance with UL1741. This Listing is then to be displayed clearly on the equipment and any supporting documentation.

d) The specifications and requirements in this section are intended to mitigate possible adverse impacts caused by the generating facility on District equipment and personnel and on other customers of the District. They are not intended to address protection of the generating facility itself, generating facility personnel, or its internal load. It is the responsibility of the generating facility to comply with the requirements of all appropriate standards, codes, statutes and authorities to protect its own facilities, personnel, and loads.

e) The specifications and requirements in this section shall apply generally to the generator-owned electric generation equipment (or any other facilities or equipment not owned by the District) to which this standard and agreement(s) apply throughout the period encompassing the Generator's installation, testing and commissioning, operation, maintenance, decommissioning and removal of said equipment. The District may verify compliance at any time, with reasonable notice.

f) The Generator shall comply with the requirements in (f)(i), (ii) and (iii) of this subsection. However, at its sole discretion, the District may approve alternatives that satisfy the intent of, and/or may excuse compliance with, any specific elements of these requirements except local, state and federal building codes.

(i) **Code and standards.** Generator shall conform to all applicable codes and standards

for safe and reliable operation. Among these are the NEC, National Electric Safety Code (NESC), the IEEE, American National Standards Institute (ANSI), and UL standards, and local, state and federal building codes. The Generator shall be responsible to obtain all applicable permit(s) for the equipment installations on its property.

(ii) **Safety.** All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) Standard at 29 CFR 1910.269, the NEC, Washington Administrative Code (WAC) rules, the Washington Division of Occupational Safety and Health (DOSH) Standard, and equipment manufacturer's safety and operating manuals.

(iii) **Power quality.** Installations will be in compliance with all applicable standards including IEEE Standard 519-1992 Harmonic Limits. The District may determine, at its sole discretion, that the IEEE Standard 519-1992 Harmonic Limits is insufficient or inadequate and therefore establish a new compliance standard.

2) Specific interconnection requirements.

- a) Generator shall furnish and install on Generator's side of the meter, a UL approved safety disconnect switch with a visible open, which shall be capable of fully disconnecting the Generating Facility from the District's electric system. The disconnect switch shall be located adjacent to District meters and shall again be of the visible break type in a metal enclosure that can be secured by a padlock. The visible open disconnect switch shall be accessible to District personnel at all times.
- b) The District shall have the right to disconnect the generating facility at the visible open disconnect switch under the following circumstances: When necessary to maintain safe electrical operating conditions; if the generating facility does not meet required standards; or if the generating facility at any time adversely affects or endangers any person, the property of any person, the District's operation of its electric system or the quality of the District's service to other customers.
- c) Nominal voltage and phase configuration of Generating Facility must be compatible to the District system at the point of common coupling, which is 114 volts to 126 volts inclusive on a 120 volt base.
- d) Applicant must provide evidence that the Generation Facility will never result in reverse current flow through the District's network protectors. All instances of interconnection to secondary spot distribution networks shall require review and written pre-approval by the District. Interconnection to distribution secondary grid networks is not allowed. Closed transition transfer switches are not allowed in secondary network distribution systems.
- e) Applicant must ensure that generating equipment complies with UL Standard #1741 (UL1741) and IEEE Standards C62.41.1 and C62.41.2. Compliance must be clearly evidenced on equipment and supporting documentation.

3) Specifications applicable to all inverter-based interconnections.

In addition to requirements contained in Section 4(1) and 4(2), any inverter-based generating facility desiring to interconnect with the District's electric system or modify an existing interconnection must

meet the technical specifications, as set forth below. The version of the technical specifications approved by the Commission is specified in Chapter 10. A more recent approved version may supersede specifications on the list below.

- a) IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, for systems 10 MVA or less.
- b) UL Standard 1741, Inverters, Converters, and Controllers for Use in Independent Power Systems. Equipment must be UL listed.
- c) IEEE Standard 929, IEEE Recommended Practice for District Interface of Photovoltaic (PV) Systems.
- d) IEEE Standard 1526m IEEE Recommended Practice for Testing and Performance of Stand-Alone Photovoltaic Systems.
- e) IEEE Standard 1547.1, Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electrical Power Systems.
- f) IEEE Standard 1547, Application Guide for Interconnecting Distributed Resources with Electric Power Systems.

If the District determines that a particular code is insufficient or inadequate to avoid detrimental electrical disturbances and/or issues, the District, in its sole discretion, may establish a higher standard.

4) Requirements applicable to all non-inverter-based interconnections.

In addition to the requirements contained in Section 4(1) and 4(2), non-inverter-based interconnection requests may require more detailed District review, testing, and approval, at Applicant cost, of the equipment proposed to be installed to ensure compliance with applicable technical specifications, in their most current approved version, including:

- a) IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, for systems 10 MVA or less.
- b) ANSI Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
- c) Applicants proposing such interconnection may also be required to submit a power factor mitigation plan and/or other studies or plans as appropriate for District review and approval.

Section 5 – Application for Interconnection

- 1) When an applicant requests interconnection from the District, the applicant shall be responsible for conforming to the rules and regulations that are in effect and on file with the District. The District will designate a point of contact and publish a telephone number or web site address for this specific purpose. The applicant seeking to interconnect a generating facility under these rules must fill out and submit a signed application form to the District. Information must be accurate, complete, and approved by the District prior to installing the generating facility.

- 2) **Application fees.** The nonrefundable interconnection application fee is set by the District according to facility size and shall be according to the District's Utility Extension Fees Policy.

Note: Any facility greater than 100 kW will not be governed by this agreement.

- 3) **Non-Discrimination.** All generation interconnection applications pursuant to this chapter will be processed by the District in a non-discriminatory manner.
- 4) **Application evaluation.** All generation interconnection requests pursuant to this chapter will be reviewed by the District for compliance with the rules of this chapter. If the District in its sole discretion finds that the application does not comply with this chapter, the District may reject the application. If the District rejects the application, it shall provide the Applicant with written notification stating its reasons for rejecting the application.

Section 6 – Interconnection Agreements and Costs

- 1) Once an application is accepted by the District as complete, the District shall conduct a site review and shall determine if any additional engineering, safety, reliability or other studies are required.
- 2) If the District determines that additional studies are required, the District will provide to the Applicant or Generator an estimate letter. The estimate letter shall include a description of the studies and a good faith estimate of the cost to perform the studies. The Applicant or Generator shall have thirty (30) business days to review the estimate letter and provide the District with any deposit required against the estimated costs. The interconnection studies may be required in order to determine the impact on system performance and any required additions and/or upgrades to the electrical system.
- 3) Upon completion of the studies, the District shall provide the Applicant or Generator with the results of the studies, including any additional interim agreements, such as construction agreements, that may be necessary and a cost estimate to complete the interconnection. If the studies determine that the interconnection is denied pursuant to RCW 80.60, the District shall provide notice of denial to the Applicant and the reasons for the denial.
- 4) Failure to return completed agreements and required deposits within the time frames specified in subsections (2) and (4) of this section may result in termination of application process by the District.

Section 7 – General Terms and Conditions of Interconnection

The general terms and conditions listed in this section shall apply to all generating facilities less than or equal to 100 kW interconnecting to the District under this chapter.

- 1) Any electrical generating facility must comply with these rules to be eligible to interconnect and operate in parallel with the District's electric system. These terms and conditions shall apply to all interconnecting generating facilities that are intended to operate in parallel with the District's electric system irrespective of whether the Applicant intends to generate energy to serve all or a part of the Applicant's load; or to sell the output to the District or any third party purchaser.

- 2) To ensure system safety and reliability of interconnected operations, all interconnected generating facilities shall be constructed and operated by Generator in accordance with this agreement and all other applicable federal, state, and local laws and regulations.
- 3) If the interconnected generating facility is owned by a third party, the third party and the Generator shall both indemnify and hold harmless the District for all risks associated with the facility being interconnected to the District's system, including liability for the District disconnecting the facility. In addition, the Generator executing the interconnection agreement for the third party generating facility shall obtain all legal rights and easements requested by the District for the District to access, install, own, maintain, operate, replace or remove its equipment, and installing the disconnect switch, on the real property where the generating facility is located or on the generating facility itself, at no cost to the District.
- 4) Prior to initial operation, the Generator must obtain a completed certificate of completion to the District, execute this Customer Interconnection Agreement and any other agreement(s) required for the disposition of the generating facility's electric power output. This Customer Interconnection Agreement between the District and Generator outlines the interconnection standards, cost allocation and billing agreements, and on-going maintenance and operation requirements.
- 5) Applicant or Generator shall promptly furnish the District with copies of such plans, specifications, records, and other information relating to the generating facility or the ownership, operation, use, or maintenance of the generating facility, as may be reasonably requested by the District from time to time.
- 6) For the purposes of public and working personnel safety, any non-approved generation interconnections discovered will be immediately disconnected from the District system.
- 7) To ensure reliable service to all District customers and to minimize possible problems for other customers, the District will review the need for a dedicated-to-single-customer distribution transformer. If the District requires a dedicated distribution transformer, the Applicant or Generator shall pay for all costs of the new transformer and related facilities.
- 8) Metering.
 - a) **Net metering** for fuel cells, facilities that produce electricity and used and useful thermal energy from a common fuel source, or facilities that use water, wind, solar energy, or biogas from animal waste as a fuel as set forth in chapter 80.60 RCW: The District, at Customer's expense, shall install, own and maintain a kilowatt-hour meter, or meters as the installation may determine, capable of registering the bi-directional flow of electricity at the point of common coupling at a level of accuracy that meets all applicable standards, regulations and statutes. The meter(s) may measure such parameters as time of delivery, power factor, voltage and such other parameters as the District shall specify. The Applicant shall provide space for metering equipment. It is the Applicant's responsibility to provide and install the current transformer enclosure (if required), meter socket(s) and junction box after the Applicant has submitted drawings and equipment specifications for District approval. The District may approve other generating sources for net metering but is not required to do so.
 - b) **Production metering:** The District requires separate metering for production, capable of being remotely accessed. This meter will record all generation produced and may be billed separately from any net metering or customer usage metering. It is the Applicant's responsibility to provide and install the meter socket(s) after the Applicant has submitted

drawings and equipment specifications for District approval. The District shall provide and install the production meter(s). All costs associated with production metering will be paid by the Applicant.

Production metering shall comply with District requirements.

- 9) Common labeling furnished or approved by the District and in accordance with NEC requirements must be posted on meter base, disconnects, and transformers informing working personnel that generation is operating at or is located on the premises.
- 10) No additional insurance will be necessary for a net metered facility that is a qualifying generating facility under chapter 80.60 RCW. A qualifying facility under RCW 80.60 is one that is 100 kW or less; and that uses water, wind, solar energy, or biogas from animal waste as a fuel, fuel cells, or that produces electricity and used and useful thermal energy from a common fuel source. For other generating facilities permitted under these standards but not a qualifying facility under chapter 80.60 RCW, additional insurance, limitations of liability and indemnification may be required by the District.
- 11) Prior to any future modification or expansion of the generating facility, the Generator will obtain District review and approval. The District reserves the right to require the Generator, at the Generator's expense, to provide corrections or additions to existing electrical devices in the event of modification of government or industry regulations and standards.
- 12) For the overall safety and protection of the District system, chapter 80.60 RCW currently limits interconnection of generation for net metering to 0.25 percent of the District's peak demand during 1996, and, beginning in 2014, to 0.50 percent of the District's peak demand during 1996. Additionally, interconnection of generating facilities to individual distribution feeders will be limited to 10-percent of the feeder's peak capacity. However, the District may, in its sole discretion, allow additional generation interconnection beyond these stated limits, or, if indicated by engineering, safety or reliability studies, restrict or prohibit new or expanded interconnected generation capacity on any feeder, circuit or network.
- 13) It is the responsibility of the Generator to protect its facilities, loads and equipment and comply with the requirements of all appropriate standards, codes, statutes and authorities.
- 14) Charges by the District to the Applicant or Generator in addition to the engineering fee, if any, will be compensatory and applied as appropriate. Such costs may include, but are not limited to, transformers, production meters, and District testing, qualification, and approval of non-UL 1741 listed equipment. The Generator shall be responsible for any costs associated with any future upgrade or modification to its interconnected system required by modifications in the District's electric system.
- 15) This section does not govern the settlement, purchase or delivery of any power generated by Generation Facility. The purchase or delivery of power, including net metering of electricity pursuant to chapter 80.60 RCW, and other services that the Applicant may require will be covered by separate agreement or pursuant to the terms, conditions and rates as may be from time to time approved by the commission. Any such agreement shall be complete prior to initial operation.
- 16) Generator may disconnect the generating facility at any time; provided that the Generator provides at least 3 business days advance notice to the District.
- 17) Generator shall notify the District prior to the sale or transfer of the generating facility, the interconnection facilities or the premises upon which the facilities are located. The Applicant or Generator shall not assign its rights or obligations under any agreement entered into pursuant to

these rules without the prior written consent of the District, which consent shall not be unreasonably withheld.

Section 8 – Certificate of Completion

All generating facilities must obtain an electrical permit and pass electrical inspection before they can be connected or operated in parallel with the District's electric system. Generator shall provide the District written certification that the generating facility has been installed and inspected in compliance with the local building and/or electrical codes. The District must review and approve in writing the certificate of completion, before the Generator generating facility may be operated in parallel with the District's electrical system. The District may withhold such approval, and shall have the right to inspect and test the interconnection facilities in accordance with IEEE 1547.1 prior to parallel operation.

Section 9 – Filings

- 1) The District shall maintain on file for inspection at its place of business, the charges, terms and conditions for interconnections pursuant to this chapter. Such filing shall include model forms of the following documents and contracts:
 - a) Application.
 - b) Interconnection Agreement.
 - c) Certificate of Completion.

Section 10 – Adoption by Reference

In this chapter, the District adopts by reference all or portions of regulations and standards identified below. They are available for inspection at the District's office or as otherwise indicated. The publications, effective date, references within this chapter, and availability of the resources are as follows:

- 1) The NEC is published by the National Fire Protection Association (NFPA).
 - a) The District adopts the version published in 2008 with amendments and interpretations as approved by the State of Washington, Department of Labor and Industries.
 - b) The NEC is a copyrighted document. Copies are available from the NFPA at 1 Batterymarch Park, Quincy, Massachusetts, 02169 or at internet address <http://www.nfpa.org>.
- 2) National Electric Safety Code (NESC) as published by IEEE.
 - a) The District adopts the version published in 2002 as approved with amendments and interpretations by the State of Washington, Department of Labor and Industries.
 - b) Copies of the National Electrical Safety Code (NESC) are available from the Institute of Electrical and Electronics Engineers at <http://standards.ieee.org/nesc>.
- 3) IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems.
 - a) The District adopts the most recent version adopted by IEEE.
 - b) Copies of IEEE Standard 1547 are available from IEEE at <http://www.ieee.org/web/standards/home>.

- 4) IEEE Standard 929, Recommended Practice for District Interface of Photovoltaic (PV) Systems.
 - a) The District adopts the version published in 2000.
 - b) Copies of IEEE Standard 929 are available from the IEEE at <http://www.ieee.org/web/standards/home>.

- 5) American National Standards Institute (ANSI) Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
 - a) The District adopts the version published in 2005.
 - b) Copies of IEEE Standard C37.90 are available from the IEEE at <http://www.ieee.org/web/standards/home>.

- 6) IEEE Standard 519, Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.
 - a) The District adopts the version published in 1992.
 - b) Copies of IEEE Standard 519 are available from the IEEE at <http://www.ieee.org/web/standards/home>.

- 7) IEEE Standard 142, IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems.
 - a) The District adopts the version published in 2007.
 - b) Copies of IEEE Standard 142 are available from IEEE at <http://www.ieee.org/web/standards/home>.

- 8) IEEE Standard C62.41.1, IEEE Guide on the Surge Environment in Low-Voltage (1000 V and less) AC Power Circuits.

The District adopts the version published in 2002.

 - a) Copies of IEEE Standard C62.41.1 are available from IEEE at <http://www.ieee.org/web/standards/home>.

- 9) IEEE Standard C62.41.2 IEEE Recommended Practices on Characteristics of Surge in Low-Voltage (1000 V and Less) AC Power Circuits.
 - a) The District adopts the version published in 2002.
 - b) Copies of IEEE Standard C62.41.2 are available from IEEE at <http://www.ieee.org/web/standards/home>.

- 10) UL, including UL Standard 1741, Inverters, Converters, and Controllers for Use in Independent Power Systems.
 - a) The District adopts the version published in 2005.
 - b) UL Standard 1741 is available from UL at <http://www.ul.com>.

- 11) United States Department of Labor and Occupational Safety and Health Administration (OSHA) Standard at 29 CFR 1910.269.
 - a) The District adopts the version published in 1994.
 - b) Copies of Title 29 Code of Federal Regulations are available from the U.S. Government Online Bookstore, <http://bookstore.gpo.gov/>, and from various third-party vendors.

- 12) State of Washington Division of Occupational Safety and Health (DOSH) Standard, chapter 296-155 WAC.
 - a) The District adopts the version in effect on March 1, 2006.

- b) The State of Washington DOSH Standard is available from the Washington Department of Labor and Industries (L&I) at P.O. Box 44000, Olympia, WA 98504-4000, or at internet address <http://www.lni.wa.gov>.

CUSTOMER:

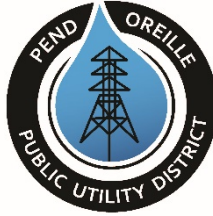
District:

Signature

Signature

Print name

Print name



Application for Interconnection a Generation Facility (up to 100 kW)

This Application is considered complete when it provides all applicable and correct information required below. Additional Information to evaluate the Application may be required. For details on any item below, please refer to the Customer Checklist for Utility Interconnection which was included in Application Packet. Submit a signed copy of this Application (including all required attachments) by mail, email, or FAX to:

PUBLIC UTILITY DISTRICT NO. 1 of PEND OREILLE COUNTY
P.O. BOX 190
130 N. WASHINGTON AVENUE
NEWPORT, WASHINGTON 99156-9530
EMAIL: service@popud.org; FAX: 509-447-9391

Application Fee

An initial non-refundable application fee must accompany this application. Additional fees may be required at the District's discretion. If you have questions regarding this Application or its status, contact the customer service department by email at service@popud.org or by phone at 509-447-3137.

APPLICANT INFORMATION – Use name as appears on the Utility's bill.

Customer Name: _____ Account Number: _____

Customer Address: _____

Phone Number: _____ Email Address: _____

Project Contact Person (if different than above): _____

Project Person Phone Number: _____ Email Address: _____

Provide names and contact information for other contractors, installers, or engineering firms involved in the installations of the generating facilities:

GENERATING FACILITY INFORMATION

Prime Mover: *Photovoltaic* ____, *Reciprocating Engine* ____, *Fuel Cell* ____, *Turbine* ____, *Other* ____

Energy Source: *Solar* ____, *Wind* ____, *Diesel* ____, *Gas* ____, *Fuel Oil* ____, *Fuel Cell (elements)* __

Other (describe) _____

System Design Capacity: _____ (kW) _____ (kVA)

Generator/Panel Manufacture: _____ Model No: _____ Qty: _____

Inverter Manufacture: _____ Model No: _____ Qty: _____

Nameplate Rating: _____ (kW) _____ (kVA)

Single-Phase: _____ Three phase: _____

Is equipment UL1741 Listed (Yes/No) _____ If yes, attached copy of manufacturer's specification and UL1741 standard.

Will the Generation Facility export power? Yes No If yes, how much? _____

Adequate documentation and information must be submitted with this application to be considered complete. Typically this should include the following:

1. Single-line diagram of the customer's system showing all electrical equipment from the generator to the point of interconnection with the Utility system, including generators, transformers, switchgear, switches, breakers, fuses, voltage transformers, and current transformers.
2. Control drawings for relays and breakers.
3. Site Plans showing the physical location of major equipment.
4. Relevant ratings of equipment. Transformer information should include capacity ratings, voltage ratings, winding arrangements, and impedance.
5. If protective relays are used, settings applicable to the interconnection protection. If programmable relays are used, a description of how the relay is programmed to operate as applicable to interconnection protection.
6. For certified equipment, documentation confirming that a nationally recognized testing and certification laboratory has listed the equipment.
7. A description of how the generator system will be operated including all modes of operation.
8. For inverters, the manufacturer name, model number, and AC power rating, Operating Manual or link to manufacturer's web site containing such manual.

9. For synchronous generators, manufacturer, model number, nameplate ratings, and impedance data (X_d , X'_d , & X''_d).
10. For induction generators, manufacturer and model number, nameplate ratings, and locked rotor current.
11. All of the electrical wiring in an interconnection generation is to be listed and/or tested by a State of Washington recognized testing and certification laboratory or qualified licensed professional organization to ensure that the design and implementation of the elements connected to the electrical power system operate as required. Typically this is seen as "Underwriters Laboratories (UL)" listed and with associated related Institute of Electrical and Electronic Engineers (IEEE) Standards, while also having met the technical standards specification of the Customers Instruction Standards Policy. The Utility at its sole discretion can have an interconnection generation re-tested for proper certification and/or approval, whose cost will be absorbed by the Applicant when improper or questionable certification is substantiated through the re-test process.

SPECIAL TERMS AND CONDITIONS

A negotiated contract will contain Special Terms and Conditions, subject to final approval by the Board of Commissioners.

CUSTOMER SIGNATURE

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

Applicant Signature

Date

Printed Name

Title

Net Energy Metering Interconnection Agreement

Customer Owned Fuel Cell, Solar, Wind, Biogas, Combined Heat and Power or Hydropower Electric Generating Facilities of 100 Kilowatts or Less

This Net Energy Metering Interconnection Agreement is executed in duplicate this ____ day of _____, 20__ between _____ (hereinafter referred to as "Customer"), and Public Utility District No. 1 of Pend Oreille County, (hereinafter referred to as "District"). Both parties, who may be herein further referred to collectively as "Parties" and individually as "Party", agree as follows:

1) CUSTOMER ELECTRIC GENERATING FACILITY

- (a) Customer has elected, in accordance with RCW 80.60 et seq., to operate either a net energy metered fuel cell, facility that produces electricity of both used and useful thermal energy from a common fuel source, or a facility that uses water, wind, solar energy, or biogas from animal waste as a fuel as set forth in chapter 80.60 RCW with a generating capacity of not more than one hundred (100) kilowatts, in parallel with the District's transmission and distribution facilities. The customer's electric generating facility (generating facility) is intended to offset either part or all of the Customer's electrical requirements.
- (b) The District will not provide wheeling for Customer as generation from the net metering electrical generating facility. The generation will only be applied to consumption at the location or area of said electrical generating facility.
- (c) Customer's Application for Net Metered Electrical Generation, including the location of the electrical generating installation facility and details on the electrical generating unit(s) is hereby incorporated into this agreement as Attachment A.
- (d) The installation is identified by the District with the following designators: Transformer No. _____, District Pole Number, _____, and District Electric Account No. _____. Also and specifically, all installations must have a Utility provided sign or placard at customer expense by the District electric service location on the District side of the meter and also at the District transformer identifying that they facility is equipped with a permanently installed independent source of electrical power. This is an addition to the customer supplementary expense of meeting the National Electrical Code (NEC) common labeling requirements that must be posted on the customer meter base, disconnect switch (with a visible open and padlock securable), and transformer, as approved by the District informing working personnel that a generating facility is operating at or is located on the premises.
- (e) A separate agreement shall be entered into for each Customer's electrical service location(s).
- (f) The electrical generating system facility used by the Customer shall be located on the Customer's premises. It shall include all equipment necessary to meet applicable safety,

power quality, and Interconnection requirements established by the NEC (690, 692, and 705), National Electrical Safety Code, the IEEE, the UL, and the District's Net Metering Interconnection Standards, as set forth in Attachment B, which is attached hereto.

- (g) The District shall have the sole authority to determine which Interconnection requirements set forth herein are applicable to Customer's proposed generating facility.

2) PAYMENT FOR NET ENERGY

- (a) The District shall measure the net electricity produced or consumed by the Customer during each billing period, in accordance with normal metering practices.
- (b) If the electricity supplied by the District exceeds the electricity generated by the Customer during the billing period, or any portion thereof, then the Customer shall be billed for the net electricity supplied by the District, together with the appropriate customer charge paid by other customers of the District in the same rate class.
- (c) If the electricity generated by the Customer during the billing period, or any portion thereof, exceeds the electricity supplied by the District, then the Customer shall be:
 - (i) billed for the appropriate customer service charge as other customers of the District in the same rate class; and
 - (ii) credited for the net excess kilowatt-hours generated during the billing period, with this kilowatt-hour credit appearing on Customer's bill for the following billing period.
- (d) On April 30th of each calendar year, any remaining unused kilowatt-hour credit accumulated by the Customer during the previous year shall be granted to the electric utility, without any compensation to the customer-generator.
- (e) Customer shall pay any amount owing for electric service provided by the District in accordance with applicable rates and policies. Nothing in this Section 2 shall limit the District's rights under applicable Rate Schedules, City Ordinances, Customer Service Policies, and General Provisions.

3) INTERRUPTION OR REDUCTION OF DELIVERIES

- (a) The District may require Customer to interrupt or reduce deliveries as follows:
 - (i) when necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any of its equipment or part of its system; or
 - (ii) if it determines that curtailment, interruption, or reduction is necessary because of emergencies, force or compliance with prudent electrical practices.
- (b) Whenever possible, the District shall give Customer reasonable notice of the possibility that interruption or reduction of deliveries may be required.
- (c) Notwithstanding any other provision of this Agreement, if at any time the District determines that either:
 - (i) the generating facility may endanger District personnel, or
 - (ii) the continued operation of Customer's generating facility may endanger the integrity of the District's electric system, then the District shall have the right to

temporarily or permanently disconnect Customer's generating facility from the District's electric system. Customer's generating facility shall remain disconnected until such time as the District is satisfied that the condition(s) referenced in (a) of (b) of this section 3.3 have been corrected.

4) INTERCONNECTION

- (a) Customer shall deliver the excess energy to the District at the District's meter.
- (b) Customer shall pay for designing, installing, inspecting, operating, and maintaining the electric generating facility in accordance with all applicable laws and regulations and shall comply with the District's Interconnection Standards set forth in Attachment B, which is attached hereto.
- (c) Customer shall pay for the District's standard watt-hour meter electrical hook-up, if not already present.
- (d) Customer shall not commence parallel operation of the generating facility until written approval of the Interconnection facilities has been given by the District. Such approval shall not be unreasonably withheld. The District shall have the right to have representatives present at the initial testing of Customer's protective apparatus. Customer shall notify the District when testing is to take place.

5) MAINTENANCE AND PERMITS

Customer shall:

- (a) Maintain the 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 District's Interconnection Standards, and
- (b) Obtain any governmental authorizations and permits required for the construction and operation of the electric generating facility and Interconnection facilities, including electrical permit(s).
- (c) Reimburse the District 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 facility or failure to maintain Customer's generating facility as required in (a) of this Section 5.

6) ACCESS TO PREMISES

The District may enter Customer's premises or property to:

- (a) Inspect, with prior notice, at all reasonable hours, Customer's generating facility's protective devices;
- (b) Read meter; and
- (c) Disconnect at the District's meter or transformer, without notice, the generating facilities if, in the District's opinion, a hazardous condition exists and such immediate action is necessary to protect persons, or the District's facilities, or property of others from

damage or interference caused by Customer's electric generating facilities, or lack of properly operating protective devices or inability to inspect the same.

The District inspection or other action shall not constitute approval by the District. The customer remains solely responsible for the safe and adequate operation of its facilities.

7) INDEMNITY AND LIABILITY

- (a) The Customer assumes the risk of all damages, loss, cost and expense and agrees to indemnify the District, its successors and assigns, and its respective directors, commissioners, officers, employees and agents, from and against any and all claims, losses, costs, liabilities, damages and expenses including, but not limited to, reasonable attorney fees, resulting from or in Interconnection with performance of the agreement or which may occur or be sustained by Name of District on account of any claim or action brought against the District for any reason including by not limited to loss to the electrical system of the Customer caused by or arising out of an electrical disturbance.
- (b) Such indemnity, protection, and hold harmless includes any demand, claim, suit or judgment for damages, death or bodily injury to all persons, including officers, employees or agents, and subcontractors of either Party hereto including payment made under or in Interconnection with any Worker's Compensation Law or under any plan for employees' disability and death benefits or property loss which may be caused or contributed to by the Interconnection, maintenance, operation, use, presence, or removal of Customer's equipment. The only exception will be liability occasioned by the sole negligence or willful misconduct of the District or its employees acting within the scope of their employment, and liability occasioned by a partial negligence of the District or its employees acting within the scope of their employment to the extent that such partial liability is fixed by a court of competent jurisdiction.
- (c) The provisions of the 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 insurance policy.
- (d) The District shall have no liability, ownership interest, control or responsibility for the Customer's Electric Generating Facility or its Interconnection with the District's electric system, regardless of what the District knows or should know about the Customer's Electric Generating Facility or its Interconnection.
- (e) Customer recognizes that it is waiving immunity under Washington Industrial Insurance Law, Title 51 RCW, and further agrees that this indemnification clause has been mutually negotiated. This indemnification shall extend to and include attorney's fees and the costs of establishing the right of indemnification hereunder in favor of the District.

8) INDEPENDENT CONTRACTORS

The Parties hereto are independent contractors and shall not be deemed to be partners, joint ventures, employees, franchisees or franchisers, servants or agents of each other for any purpose whatsoever under or in Interconnection with this Agreement.

9) GOVERNING LAW

This Agreement shall be interpreted, governed, and constructed under the laws of the State of Washington as if executed and to be performed wholly within the State of Washington. Venue of any action arising hereunder or related to this agreement shall lie in Pend Oreille County, Washington.

10) FUTURE MODIFICATION OR EXPANSION

Any future modification or expansion of the Customer owned generating facility will require all associated electrical wiring to be listed and/or tested by a State of Washington recognized testing and certification laboratory or qualified licensed professional organization to ensure that the electrical elements associated with the modification or expansion are properly connected to the electrical power system and operate as required by the District. The District at its sole discretion can require an interconnection generation re-tested for proper certification and/or approval. The cost of the re-testing shall be borne by the Customer. In addition, any future modification or expansion of the Customer facility will require an engineering, safety and reliability review, and approval by the District. The District reserves the right to deny the modification or expansion or to require the Customer, at Customer's expense, to provide modifications or additions to existing electrical devices including, but not limited to protection device and meters, in the event of changes to government or industry regulation and/or standards.

11) AMENDMENTS, MODIFICATIONS OR WAIVER

Any amendments or modifications to this 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 or 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 waiver of the breach of any other term or covenant unless such waiver is in writing.

12) ASSIGNMENT

The Customer shall not assign its rights under this Agreement without the express written consent of the District. The District may impose reasonable conditions on any such assignment to ensure that all of Customer's obligations under this Agreement are met and that none of Customer's obligations under this Agreement are transferred to the District as a result of default, bankruptcy, or any other cause.

13) NOTICES

All written notices shall be directed as follows:

<p>If to the District:</p> <p>Pend Oreille PUD Attn: Key Accounts P.O. Box 190 130 N. Washington Newport, WA 99156</p> <p>By Email: keyaccounts@popud.org</p> <p>With a copy to: notices@popud.org sholderman@popud.org</p>	<p>If to Customer:</p> <p>By Email:</p>
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Customer notices to the District, pursuant to this Section 15, shall refer to the Service Address set forth in Appendix A, Application for Net Metered Electrical Generation.

14) TERM OF AGREEMENT

This Agreement shall be in effect when signed by the Customer and the District 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 13.

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:

DISTRICT:

Signature

Signature

Print name

Print name

Date

Date