

Issued: June 28, 2019

Effective: July 28, 2019

WN U-60 Attachment "C" to Schedule 152. Page 1

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

**SCHEDULE 152
APPLICATION FOR INTERCONNECTING A GENERATING FACILITY
TIER 2 OR TIER 3**

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required. Certain terms in this Application are defined in Schedules 80 and 152.

Application Fee

A non-refundable fee must accompany this Application.

For Generating Facilities of 0 kW to 25 kW, the fee is \$100.00

For Generating Facilities of greater than 25 kW to 500 kW that do not qualify for the Interconnection process outlined in Schedule 150, the fee \$500.00

For Generating Facilities of greater than 500 kW to 20 MW, the fee is \$1000.00

For Generating Facilities of greater than 2 MW or up to 20 MW the fee is \$1000.00. psei.

Puget Sound Energy ("PSE" or "Company"):

[Note: The blanks below must be filled in prior to sending this form to an Interconnection Customer.]

Designated Contact Person: _____

Address: _____

Telephone Number: _____

Fax: _____

E-Mail Address: _____

Preamble and Instructions

An Interconnection Customer who requests Interconnection must submit this Application by hand delivery, mail, e-mail, or fax to the Company.

Interconnection Customer Information

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Facility Location (if different from above): _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: _____

Title: _____

Address: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Application is for: _____ New Generating Facility
 _____ Capacity addition to Existing Generating Facility

If capacity addition to existing facility, please describe: _____

Will the Generating Facility be used for any of the following?

Net Metering? Yes ___ No ___

To Supply Power to the Interconnection Customer? Yes ___ No ___

To Supply Power to Others? Yes ___ No ___

For installations at locations with existing electric service to which the proposed Generating Facility will Interconnect, provide:

_____ (Existing PSE Account Number*)

Requested Point of Interconnection: _____

Interconnection Customer's Requested In-Service Date: _____

Generating Facility Information

Information applies only to the Generating Facility, not to the Interconnection Facilities.

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Energy Source: Solar Wind Hydro Hydro Type (e.g. Run-of-River): _____
 Diesel Natural Gas Fuel Oil Other (state type) _____

Prime Mover: Fuel Cell Recip Engine Gas Turb Steam Turb Microturbine PV
Other

Synchronous Generators

Generator Nameplate Rating: _____ kW (Typical) Generator Nameplate kVA: _____

Interconnection Customer or Customer-Site Load: _____ kW (if none, so state)

Typical Reactive Load (if known): _____

Maximum Physical Export Capability Requested: _____ kW

List components of the Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____

Is the prime mover compatible with the certified protective relay package? Yes No

Generator:

Manufacturer, Model name, & Number: _____

Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____

Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor:

Rated Power Factor: Leading: _____ Lagging: _____

Direct Axis Synchronous Reactance, Xd: _____ P.U.

Direct Axis Transient Reactance, X' d: _____ P.U.

Direct Axis Subtransient Reactance, X" d: _____ P.U.

Negative Sequence Reactance, X2: _____ P.U.

Zero Sequence Reactance, X0: _____ P.U.

KVA Base: _____

Field Volts: _____

Field Amperes: _____

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Induction Generators

Generator Nameplate Rating: _____ kW (Typical) Generator Nameplate kVA: _____

Interconnection Customer or Customer-Site Load: _____ kW (if none, so state)

Typical Reactive Load (if known): _____

Maximum Physical Export Capability Requested: _____ kW

List components of the Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____

Is the prime mover compatible with the certified protective relay package? Yes No

Generator

Manufacturer, Model name, & Number: _____

Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____ or

Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor

Rated Power Factor: Leading: _____ Lagging: _____

Motoring Power (kW): _____

I22t or K (Heating Time Constant): _____

Rotor Resistance, Rr: _____

Stator Resistance, Rs: _____

Stator Reactance, Xs: _____

Rotor Reactance, Xr: _____

Magnetizing Reactance, Xm: _____

Short Circuit Reactance, Xd": _____

Exciting Current: _____

Temperature Rise: _____

Frame Size: _____

Design Letter: _____

Reactive Power Required in Vars (No Load): _____

Reactive Power Required in Vars (Full Load): _____

Total Rotating Inertia, H: _____ Per Unit on kVA Base

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Inverter Based Generation

Source Nameplate Rating: _____ DC KW (Typical) Inverter Nameplate Rating _____ AC KW

Interconnection Customer or Customer-Site Load: _____ kW (if none, so state)

Will site load be a separate service _____

Reactive Capability : _____

Maximum Physical Export Capability Requested: _____ kW

List components of the Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____

Is the inverter controller UL1741 listed? __Yes __ No

Generator (or solar collector)

Manufacturer, Model name, & Number: _____

Version Number: _____

Inverter Model number: _____

Output Power Rating in kW: (Summer) ____ (Winter) ____

List of adjustable set points for the protective equipment, including software adjustable points: _____

Contact the Company to discuss this item prior to filling out the Application.

Note: A completed Power Systems Load Flow data sheet must be supplied with the Application.

Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: _____ Instantaneous __ or RMS? ____

Harmonics Characteristics: _____

Start-up requirements: _____

Generating Facility Characteristic Data (for rotating machines)

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Note: Please contact the Company prior to submitting the Application to determine if the specified information below is required.

RPM Frequency: _____
(*) Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators:

Direct Axis Synchronous Reactance, X_d : _____ P.U.
Direct Axis Transient Reactance, X'_d : _____ P.U.
Direct Axis Subtransient Reactance, X''_d : _____ P.U.
Negative Sequence Reactance, X_2 : _____ P.U.
Zero Sequence Reactance, X_0 : _____ P.U.
KVA Base: _____
Field Volts: _____
Field Amperes: _____

Induction Generators

Motoring Power (kW): _____
 I_2^2t or K (Heating Time Constant): _____
Rotor Resistance, R_r : _____
Stator Resistance, R_s : _____
Stator Reactance, X_s : _____
Rotor Reactance, X_r : _____
Magnetizing Reactance, X_m : _____
Short Circuit Reactance, X_d'' : _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required in Vars (No Load): _____
Reactive Power Required in Vars (Full Load): _____
Total Rotating Inertia, H: _____ Per Unit on kVA Base

Excitation and Governor System Data for Synchronous Generators Only

Provide an appropriate IEEE model block diagram of excitation system, governor system, and power system stabilizer (PSS) in accordance with the regional reliability council criteria. Studies may determine that a PSS is required. A copy of the manufacturer's block diagram may not be substituted.

Interconnection Facilities Information

Will a transformer be used between the generator and the Point of Common Coupling (PCC)?
__Yes __No

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Will the transformer be provided by the Interconnection Customer? Yes No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: single phase three phase? Size: _____ kVA
Transformer Impedance: _____ % on _____ kVA Base

If Three Phase:

Transformer Primary: _____ Volts _____ Delta _____ Wye _____ Wye Grounded
Transformer Secondary: _____ Volts _____ Delta _____ Wye _____ Wye Grounded
Transformer Tertiary: _____ Volts _____ Delta _____ Wye _____ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach a copy of the fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____
Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____
Load Rating (Amps): _____ Interrupting Rating (Amps): _____
Trip Speed (Cycles): _____

Interconnection Protective Relays (if applicable):

If Microprocessor-Controlled:

List of functions and adjustable set points for the protective equipment, including software adjustable points:

Setpoint Function	Minimum	Maximum
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

If Discrete Components:

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Current Transformer Data (if applicable):

(Enclose a copy of the Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: _____
Type: _____ Accuracy Class: ___ Proposed Ratio Connection: ___

Manufacturer: _____
Type: _____ Accuracy Class: ___ Proposed Ratio Connection: ___

Potential Transformer Data (if applicable):

Manufacturer: _____
Type: _____ Accuracy Class: ___ Proposed Ratio Connection: ___

Manufacturer: _____
Type: _____ Accuracy Class: ___ Proposed Ratio Connection: ___

General Information

Enclose a copy of the site electrical one-line diagram showing the configuration of all Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a Washington State licensed electrical Professional Engineer if the Generating Facility is larger than 50 kW. Is one-line diagram enclosed? __Yes __No

Enclose a copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) _____

Enclose a copy of any site documentation that describes and details the operation of the protection and control schemes. Is available documentation enclosed? __Yes __No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
Are schematic drawings enclosed? __Yes __No

Issued: June 28, 2019

Effective: July 28, 2019

WN U-60 Attachment "C" to Schedule 152. Page 9

PUGET SOUND ENERGY

Attachment "C" Application - Tier 2 and Tier 3

Notification of Potential Voltage Irregularities:

The Company's Electric System voltage may be routinely at the upper limits of the range described in WAC 480-100-373, and this may limit the ability of a Generating Facility to export power to the PSE Electric System. For example, for a nominal 240-volt service the voltage could range up to 252 volts.

Applicant Signature

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

For Interconnection Customer: _____ Date: _____