



Received:

**SMALL GENERATOR INTERCONNECTION REQUEST
(Application Form)**

Transmission Provider: NorthWestern Energy

Designated Contact Person: Carolyn Loos

Address: 40 East Broadway
Butte, MT 59701

Telephone Number: 406-497-3387

Fax: 406-497-3002

E-Mail Address: carolynd.loos@northwestern.com

An Interconnection Request is considered complete when it provides all applicable and correct information required below. Per SGIP section 1.5, documentation of site control must be submitted with the Interconnection Request.

Preamble and Instructions

An Interconnection Customer who requests a Federal Energy Regulatory Commission jurisdictional interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

Processing Fee or Deposit:

If the Interconnection Request is submitted under the Fast Track Process, the non-refundable processing fee is \$500.

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Transmission Provider a deposit not to exceed \$1,000 towards the cost of the feasibility study.

Interconnection Customer Information

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

Name:

Contact Person:

Mailing Address:

City: State: Zip:

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: Claud E. Matney, PE

Title: Consulting Engineer

Address: Matney-Frantz Engineering, LLC, 105 West Main, Suite G, Bozeman, MT 59715

Telephone (Day): 406 581 9819 Telephone (Evening):

Fax: E-Mail Address: CMatney@MatneyFrantz.com

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

If capacity addition to existing facility, please describe:

Will the Small 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 Small Generating Facility will interconnect, provide:

(Local Electric Service Provider*)

(Existing Account Number*)

[*To be provided by the Interconnection Customer if the local electric service provider is different from the Transmission Provider]

Contact Name:

Title:

Address:

Telephone (Day): Telephone (Evening):

Fax: E-Mail Address:

Requested Point of Interconnection:

Interconnection Customer's Requested In-Service Date:

Small Generating Facility Information

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

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

Type of Generator: Synchronous Induction Inverter

Generator Nameplate Rating: kW (Typical) Generator Nameplate kVAR:

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 Small 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 (or solar collector)
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:

Total Number of Generators in wind farm to be interconnected pursuant to this Interconnection Request: Elevation: Single phase Three phase

Inverter Manufacturer, Model Name & Number (if used):

List of adjustable set points for the protective equipment or software:

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

Small Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: Instantaneous or RMS?

Harmonics Characteristics:

Start-up requirements:

Small Generating Facility Characteristic Data (for rotating machines)

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

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. 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? Yes No

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 copy of 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 Setpoints for the protective equipment or software:

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

If Discrete Components:

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

Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:
Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:
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Current Transformer Data (If Applicable):

(Enclose Copy of 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 copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed? Yes No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small 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 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

Applicant Signature

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

For Interconnection Customer:

Date: