



**Application for Small Generator Facility Interconnection  
Tier 2, Tier 3 or Tier 4 Interconnection**

(See ARSD chapter 20:10:36 for the requirements for a Tier 2, Tier 3, or Tier 4 Interconnection.)

**Applicant/Interconnection Customer Contact Information:**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_

Facsimile Number: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

**Address of Customer Facility Where Small Generator Facility will be Interconnected:**

(if different from above)

Public Utility: Black Hills Energy (BHE) \_\_\_\_\_

Account Number (existing BHE customer): \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**System Installer/Consulting Engineer:**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Evening): \_\_\_\_\_

Facsimile Number: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

**Electric Service Information for Applicant's Facility Where Generator Will Be Interconnected:**

Capacity: \_\_\_\_\_(Amps) Voltage: \_\_\_\_\_(Volts)

Type of Service:  Single Phase  Three Phase

If Three-Phase Transformer, Indicate Type:  Wye  Delta

**Requested Procedure Under Which to Evaluate Interconnection Request:**

Please indicate below which review procedure applies to the interconnection request.

**Tier 2** - Certified interconnection equipment with an aggregate Electric Nameplate Capacity of 2 MW or less. Indicate type of certification below. The application fee amount is \_\_\_\_\_ (\$50 plus \$1 per KW of rated generation output up to a maximum of \$500).

Lab Tested -- tested to IEEE 1547.1 and other specified standards by a nationally recognized testing laboratory and is appropriately labeled.

Field Tested – an identical small generator facility has been approved by the Public Utility under a Tier 4 study review process within the prior 36 months of the date of this interconnection request.

**Tier 3** – A Small Generator Facility connected to the EDS that does not export power. The Electric Nameplate Capacity rating must be 50 KW or smaller if connecting to an area network, or 2 MW or smaller if connecting to a radial distribution feeder. The application fee amount is \_\_\_\_\_ (\$100 plus \$2 per KW of rated generation output up to a maximum of \$1,000).

**Tier 4** – Electric Nameplate Capacity rating is 10 MW or smaller and the Small Generator Facility does not qualify for a Tier 1, Tier 2, or Tier 3 review or has been reviewed but not approved under a Tier 1, Tier 2, or Tier 3 review. Application fee amount is \_\_\_\_\_ (\$100 plus \$2 per KW of rated generation output up to a maximum of \$1,000).

**Field Tested Equipment:**

If the field tested equipment box is checked above, please include with the completed application the following information which will be required for review of Tier 2 field tested small generator facilities:

- A copy of the Certificate of Completion, signed by the Public Utility that has approved an identical small generator facility for parallel operation.
- A copy of all documentation submitted to the Public Utility that approved the Small Generator Facility for parallel operation under a Tier 4 study process.
- A written statement by the Applicant indicating that the small generator facility being proposed is identical, except for Minor Equipment Modification, to the one previously approved by the Public Utility for parallel operation.

- If a Tier 2 Application utilizing Field Tested equipment is proposed, the remainder of the application will not be required to be completed.

**Small Generator Facility Information:**

**List interconnection components/system(s) to be used in the Small Generation Facility that is lab certified (required for Lab Tested, Tier 2 Interconnection requests only).**

Component/System \_\_\_\_\_ NRTL Providing Label & Listing

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

*Please provide copies of manufacturer brochures or technical specifications.*

**Energy Production Equipment/Inverter Information:**

Synchronous     Induction     Inverter     Other \_\_\_\_\_

Electric Nameplate Rating: \_\_\_\_\_ KW    \_\_\_\_\_ kVA

Rated Voltage: \_\_\_\_\_ Volts

Rated Current: \_\_\_\_\_ Amps

System Type Tested (Total System):  Yes     No (attach product literature)

**For Synchronous Machines:**

Manufacturer: \_\_\_\_\_

Model No.: \_\_\_\_\_ Version No.: \_\_\_\_\_

Submit copies of the Saturation Curve and the Vee Curve.

Salient     Non-Salient

Torque: \_\_\_\_\_ lb-ft    Rated RPM: \_\_\_\_\_

Field Amperes: \_\_\_\_\_ at rated generator voltage and current and \_\_\_\_\_% PF over-excited

Type of Exciter: \_\_\_\_\_

Output Power of Exciter: \_\_\_\_\_

Type of Voltage Regulator: \_\_\_\_\_

Locked Rotor Current: \_\_\_\_\_ Amps

Synchronous Speed: \_\_\_\_\_ RPM

Winding Connection: \_\_\_\_\_

Min. Operating Frequency/Time: \_\_\_\_\_

Generator Connection:  Delta     Wye     Wye Grounded

Direct-axis Synchronous Reactance: (Xd) \_\_\_\_\_ ohms

Direct-axis Transient Reactance: (X'd) \_\_\_\_\_ ohms

Direct-axis Sub-transient Reactance: (X''d) \_\_\_\_\_ ohms

**For Induction Machines:**

Manufacturer: \_\_\_\_\_  
Model No.: \_\_\_\_\_ Version No.: \_\_\_\_\_  
Locked Rotor Current: \_\_\_\_\_ Amps  
Rotor Resistance: (Rr) \_\_\_\_\_ ohms Exciting Current: \_\_\_\_\_ Amps  
Rotor Reactance: (Xr) \_\_\_\_\_ ohms Reactive Power Required: \_\_\_\_\_  
Magnetizing Reactance: (Xm) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (No Load)  
Stator Resistance: (Rs) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (Full Load)  
Stator Reactance: (Xs) \_\_\_\_\_ ohms  
Short Circuit Reactance: (X'd) \_\_\_\_\_ ohms  
Phase:  Single  Three-Phase  
Frame Size: \_\_\_\_\_ Design Letter: \_\_\_\_\_ Temp. Rise: \_\_\_\_\_ °C.

**Reverse Power Relay Information: (This section applies to Tier 3 Review only.)**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Electric Nameplate Capacity rating: (kVA) \_\_\_\_\_

**Additional Information For Inverter Based Facilities:**

**Inverter Information:**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Type:  Forced Commutated  Line Commutated  
Electric Nameplate Capacity Rated Output: \_\_\_\_\_ Amps \_\_\_\_\_ Volts \_\_\_\_\_ KW  
Efficiency: \_\_\_\_\_ % Power Factor: \_\_\_\_\_ %

**DC Source / Prime Mover:**

Solar  Wind  Hydro  Other \_\_\_\_\_  
Electric Nameplate Capacity Rating: \_\_\_\_\_ KW Rating: \_\_\_\_\_ kVA  
Rated Voltage: \_\_\_\_\_ Volts  
Open Circuit Voltage (if applicable): \_\_\_\_\_ Volts  
Rated Current: \_\_\_\_\_ Amps  
Short Circuit Current (If applicable): \_\_\_\_\_ Amps

**Other Facility Information:**

Is Facility a Qualified Facility? Yes  No   
If yes, has Applicant completed FERC's "Notice of Self Certification"? Yes  No   
Verification Number Received from FERC: \_\_\_\_\_  
One Line Diagram attached:  Yes  No  
Plot Plan attached:  Yes  No  
Installation Test Plan attached:  Yes  No

Estimated Commissioning Date (if known): \_\_\_\_\_

Applicant Signature:

I hereby certify that all of the information provided in this application request form is correct.

Applicant Signature: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application:

**Application fee included:**

Amount \_\_\_\_\_

**Tier 2, 3, or 4 Interconnection Request Acknowledgement**

I hereby acknowledge the receipt of an Interconnection Request and Application Fee.

Approval for a Tier 2, Tier 3, or Tier 4 Small Generator Facility interconnection is contingent upon the Applicant's Small Generator Facility passing the screens and completing the review process set forth in ARSD chapter 20:10:36 and is not granted by the Public Utility's signature on this Application form.

BHE Representative Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**Note: Black Hills Energy will retain a copy of this completed and signed form and return the original and any attachments to the Applicant.**