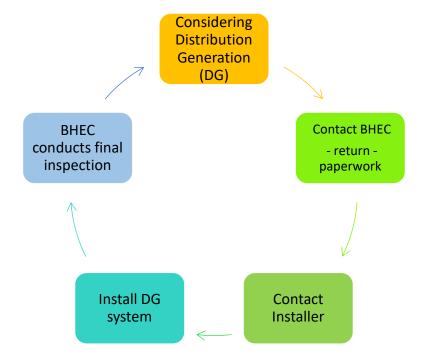
# **Generation Packet**



- Contact BHEC if you're considering installing your own generation.
  - We will discuss what rates are available
  - Provide necessary paperwork
  - Provide installer information
- Paperwork to return:
  - Page #2, 3, 9: applicant
  - Page #10: installer

# BLACK HILLS ELECTRIC COOPERATIVE, INC.

## APPLICATION FOR DISTRIBUTED GENERATION

APPLICATION, INTERCONNECTION AGREEMENT, AND CERTIFICATION OF COMPLETION (exhibit A)

MUST BE COMPLETED AND RETURNED TO BHEC.

Name:		BHEC account #	
Mailing address:			
City:	State: Zip o	code:	
Telephone:	Alternat	ive telephone:	
E-mail address:		·	
SYSTEM INSTALLER	<u>:</u>		
GenPro	Black Hills Solar	Homeowner	
Other:			
Phone:		E-mail:	
Mailing address:			
City:	State:	Zip code:	-
CENERAL QUESTIO	NIC.		
GENERAL QUESTIO			
	tart date:		
	ration equipment:		
	такон суакритене.		
Rated output capacity: _			
Are you planning to have	e battery storage?		
If yes, what capacity?			

# BLACK HILLS ELECTRIC COOPERATIVE, INC. INTERCONNECTION AGREEMENT OF DISTRIBUTED GENERATION LESS THAN 50 KW

This Interconnection Agreement ("Agreement") is made and entered on thisday of
, 20, by Black Hills Electric Cooperative, Inc. ("Cooperative"), a corporation organized
under the laws of the State of South Dakota, and,
independent power producer ("IPP"), each hereinafter sometimes referred to individually as "Party" or
both referred to collectively as the "Parties". In consideration of the mutual covenants set forth herein,
the Parties agree as follows:
This agreement provides for the safe and orderly operation of the electrical facilities interconnecting the
IPP facility at and the electrical
(site location)
distribution facility owned by Black Hills Electric Cooperative, Inc.

#### 1) PURPOSE:

It is the intent of the above IPP to interconnect distributive generated power to the Cooperative's electrical distribution system.

Black Hills Electric Cooperative, Inc. intends to operate the distribution system to maintain a high level of service to its members and to maintain a high level of power quality.

Both parties intend to operate the facilities to ensure the safety of the public and their employees.

#### 2) SUSPENSION OF INTERCONNECTION:

It is intended that the interconnection should not compromise Cooperative's protection or operational requirements. The operation of the IPP system and the quality of electric energy supplied by the IPP system shall meet the standards as specified by the Cooperative. If the operation of the IPP system or quality of electric energy supplied (in the case of the power export) does not meet the standards as specified, then the Cooperative will notify the IPP to take reasonable and expedient corrective action. The Cooperative shall have the right to disconnect the IPP's system, until compliance is reasonably demonstrated. Notwithstanding, Black Hills Electric Cooperative, Inc. may, in its sole discretion, disconnect the IPP generating plant from the distribution facility without notice if the operating of the generating plant imposes a threat, in the Cooperative's sole judgment, to life and property.

#### 3) MAINTENANCE OUTAGES:

Maintenance outages will occasionally be required on the Cooperative's system, and the Cooperative will provide as much notice and planning as practical to minimize downtime. It is noted that in some emergency cases such notice may not be practical. Compensation will not be made for unavailability of the Cooperative's facilities due to outages.

#### 4) ESTABLISHMENT OF POINT OF INTERCONNECTION AND DELIVERY POINT:

The point where the IPP facilities interconnect to the Cooperative's system is the "Delivery Point." Cooperative and IPP agree to interconnect the IPP facilities at the Point of Interconnection in accordance with the Cooperative's policies rules, regulations, by-laws, rates, and tariffs (the "Rules"), which are incorporated herein by reference.

# 5) RESPONSIBILITIES OF COOPERATIVE AND IPP INSTALLER, OPERATION AND MAINTENANCE OF FACILITIES:

The IPP will, at its own cost and expense, install, operate, maintain, repair, and inspect, and shall be fully responsible for all IPP generating equipment and interconnection facilities. The IPP shall conduct operations of its facilities in a safe and reliable manner, in compliance with all aspects of the Rules, and in accordance with industry-standard Prudent Operating Practice.

Maintenance of the IPP's Facilities shall be performed in accordance with the applicable manufacturer's recommended maintenance schedule. The IPP agrees to cause its Facilities to be constructed in accordance with the Rules and to specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code as approved by the American National Standards Institute, and in effect at the time of construction.

The IPP covenants and agrees to cause the design, installation, maintenance, and operation of its Facilities to reasonably minimize the likelihood of a malfunction or other disturbance, damaging or otherwise affecting or impairing the Cooperative's system. IPP shall, at its expense, provide, install, own, operate and maintain protection equipment, including such protective and regulating devices as required by the Cooperative, or as may be otherwise required by industry-standard Prudent Operating Practice to protect persons and property and to minimize detrimental effects to the Cooperative's system. IPP shall comply with all applicable laws, regulations, zoning codes, building codes, safety rules, and environmental restrictions applicable to the design, installation, operation, and maintenance of its Facilities.

The IPP shall obtain all environmental and other permits lawfully required by governmental authorities before the construction of the Facilities and the Interconnection Facilities.

The Cooperative will notify the IPP if there is evidence that the operation of the IPP Facilities causes disruption or deterioration of service to other customers served from the Cooperative's system or

operation causes damage to the system. The IPP will notify the Cooperative of any emergency or hazardous condition or occurrence with the IPP Facilities or Interconnection Facilities, which could affect safe operation of the system.

If at any time the IPP exceeds the power output defined in this Agreement, the Cooperative reserves the right to disconnect the IPP equipment from the Cooperative system. The IPP shall make necessary adjustments and demonstrate to the Cooperative's satisfaction that the system will perform adequately before service is reconnected. If owner continues to violate power output levels, the Cooperative may, at its option, terminate this Agreement.

#### 6) MODIFICATIONS:

Either party may undertake modifications to its facilities; provided that the IPP shall not increase the output of its Facilities or make other material changes or modifications to the configuration or operation of its Facilities or Interconnection Facilities without the prior written consent of the Cooperative. If the IPP plans to undertake a modification that reasonably may be expected to impact the system, the IPP shall submit such changes to the Cooperative with sufficient information regarding such modifications to enable the Cooperative to evaluate the potential impact of such modification to the Cooperative's system before commencement of the work.

#### 7) POWER SALES TO COOPERATIVE:

Interconnection of the Facilities with the System does not grant the IPP the right to export power, nor does it constitute an agreement by the Cooperative to purchase or wheel excess power that the Cooperative is not obligated to accept under this Agreement. The Cooperative will, under the terms of this Agreement, purchase electrical energy from the IPP generation facilities delivered to the Cooperative at the Point of Delivery. The total rate paid for distributed power will be set annually by the Cooperative's wholesale power supplier, Basin Electric, for system sizes defined below:

- **a.** For those systems under 50kW in size, the rate paid by the Cooperative will be the Cooperative's Avoided Cost set each year by its power provider based on the grid location. The Avoided Cost will be updated on our website on an annual basis.
- **b.** For systems over 50 kW in size, and only after receiving approval from Basin Electric for interconnection of the IPP's facilities to the electrical grid, the rate paid by the Cooperative will be the rate set by Basin Electric.

#### 8) LIMITATION OF LIABILITY AND INDEMNIFICATION:

- **a.** Notwithstanding any other provision in this Agreement, with respect to the Cooperative's provision of electric service to the IPP and the services provided by the Cooperative pursuant to this Agreement, the Cooperative's liability to the IPP shall be limited as set forth in the Cooperative's tariffs and terms and conditions for electric service.
- **b.** If a Force Majeure event prevents a party from fulfilling any obligations under this agreement, such party will promptly notify the other party in writing and will keep the other party informed on a continuing basis as to the scope and duration of the Force Majeure event. The affected party will specify the circumstances of the Force Majeure event, its expected duration and the steps that the affected party is taking to mitigate the effect of the event on its performance. The affected party will be entitled to suspend or modify its performance of obligations under this Agreement but will use reasonable efforts to resume its performance as soon as possible.
- c. Notwithstanding the Force Majeure section of this Agreement, the IPP shall assume all liability for and shall indemnify the Cooperative and its members, trustees, directors, officers, managers, employees, agents, representatives, affiliates, successors and assigns for and shall hold them harmless from and against any claims, losses, costs, and expenses of any kind or character to the extent that they result from the IPP's negligence or other wrongful conduct in connection with the design, construction, installation, operation or maintenance of the IPP's Facilities. Such indemnity shall include, but is not limited to, financial responsibility for (a) monetary losses; (b) reasonable costs and expenses of defending an action or claim; (c) damages related to death or injury; (d) damages to property; and (e) damages for the disruption of business.
- d. The Cooperative and the IPP shall each be responsible for the safe installation, maintenance, repair, and condition of their respective facilities, including, but not limited to; generators, lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. The Cooperative does not assume any duty of inspection related to the IPP's generators, lines, wires, switches, or other equipment or property and will not be responsible therefor. The IPP assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith at or beyond the Point of Interconnection.
- **e.** For the mutual protection of the IPP and the Cooperative, a state-issued or city-issued wiring affidavit must be maintained at the site of the Facilities and available for inspection by the Cooperative at any time. Interconnection between the Cooperative's system and the IPP's Facilities require authorization from the regulatory authority having jurisdiction before the IPP Facilities may be energized.

#### 10) RIGHT OF ACCESS, EQUIPMENT INSTALLATION, & INSPECTION:

The Cooperative may send an employee, agent or contractor onto the premises of the IPP at any time whether before, during or after the time the Facilities first produce energy to inspect the Facilities, and to observe the Facility's installation, commissioning (including any testing), startup, operation, and maintenance.

At any time, the Cooperative shall have access to the IPP's premises for any reasonable purpose in connection with the interconnection described in this Agreement, the Rules, or to provide service to its consumers.

#### 11) DISCONNECTION OF FACILITIES:

The IPP retains the option to disconnect its Facilities from the System, provided that the IPP notifies the Cooperative of its intent to disconnect by giving the Cooperative at least sixty (60) days prior written notice. Such disconnection shall not be a termination of this Agreement unless the IPP exercises its Termination Rights under the provisions of the section titled "Effective Term and Termination Rights".

The IPP shall disconnect Facilities from the System upon the effective date of any termination resulting from and required by actions under the provisions of the section titled "Effective Term and Termination Rights".

The Cooperative shall have the right to disconnect or cause the IPP to disconnect the Facilities from the System and suspend service when the Cooperative deems the disconnection necessary for the protection of personnel, property, or operation of the system, including effects on power quality of the Cooperative's system caused by the IPP's equipment. The Cooperative shall have the right to suspend service and disconnect or cause the IPP to disconnect the Facilities from the System for maintenance purposes, to effect repairs on the System, or in the event of a forced outage. The Cooperative shall use its reasonable efforts to provide the IPP with reasonable prior notice.

The Cooperative has the right to interrupt service to the IPP as needed to perform maintenance on the Cooperative's system.

#### 12) METERING:

The Cooperative shall purchase, own, install, and maintain such metering equipment as it may be necessary to meter the electrical output of the Facilities. All costs associated with purchasing, providing and installing the required metering infrastructure shall be borne by the IPP. Metering shall meet the Cooperative's data collection and accuracy standards for equivalent electrical services. Metering provided by the Cooperative, at the IPP's cost, shall be compatible with the Cooperative's automated meter reading system and read remotely. If the IPP is on the electric heat rate, the Cooperative's heat rate shall be forfeited and the heat meter will be removed.

#### 13) DISCONNECT EQUIPMENT:

A lockable, manually operable, visible load-break disconnecting device is required to be installed in a location readily accessible at all times to Cooperative personnel to isolate all generation equipment. The Cooperative retains the right to disconnect generation equipment for any reason without notice to the IPP.

#### 14) EFFECTIVE TERM AND TERMINATION RIGHTS:

This Agreement becomes effective when executed by both Parties and shall continue in effect until terminated. This Agreement may be terminated as follows: (a) the IPP may terminate this Agreement at any time by giving the Cooperative at least sixty (60) days written notice; (b) the Cooperative may terminate upon failure by the IPP to generate energy from the Facilities within six (6) months after completion of the interconnection, or if the IPP ceases to generate and deliver power to the Cooperative for a period exceeding 6 months; (c) either Party may terminate by giving the other Party at least sixty (60) days prior written notice that the other Party is in default of any of the terms and conditions of the Agreement or the Rules or any rate schedule, tariff, regulation, contract, or policy of the Cooperative, so long as the notice specifies the basis for termination and there is opportunity to cure the default; (d) the Cooperative may terminate by giving the IPP at least sixty (60) days' notice in the event that there is a material change in an applicable law, or any requirement of the Cooperative's wholesale electric suppliers or of any transmission utility, independent system operator or regional transmission organization having responsibility for the operation of any part of the System.

#### 15) SEVERABILITY:

If any portion or provision of this Agreement is held or adjudged for any reason to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

#### 16) AMENDMENT:

This Agreement may be amended only upon mutual agreement of the Parties; which amendment will not be effective until reduced to writing and executed by the Parties.

#### 17) LIMITATIONS:

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties. This Agreement may not be assigned by the IPP without the prior written consent of the Cooperative. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties.

#### **18) MULITPLE COUNTERPARTS:**

This Agreement may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective duly authorized representatives.

Black Hills Electric Cooperative, Inc.	IPP
Signed:	Signed:
Printed:	Printed:
Title:	

This institution is an equal opportunity provider, employer, and lender.

### **BHEC Small Generator Certificate of Completion Form**

<u>Installer</u>	Check if owner-installed $\square$
Name:	
Mailing Address:	
City:	State: Zip Code:
Telephone:	E-mail:
Inverter Manufacturer:	Model:
Inverter Electric Name	plate Capacity: (kW)
Inverter Electrical Conr	nection:(AC Volts) Phase: Single  Three Phase
Installed Capacity:	(kW) Battery Storage Capacity: (kW)
Prime Mover:	Photovoltaic $\square$ Reciprocating Engine $\square$ Fuel Cell $\square$ Turbine $\square$
Energy Source:	Other  Solar
	fied? $\square$ Yes $\square$ No turer's cut sheet showing listing and label information from the appropriate L 1741 listing.)
Load-break disco	nnect device is installed to isolate all generation equipment.
•	dequate homeowner's general liability insurance sufficient to insure against all direct liabilities given the size of the small generator facility.
The Small General	ator Facility is complete and has been approved by the local electric inspector
having jurisdiction. A si	gned electric inspection form is attached.
Signed(Signature of Installer)	Date

Acceptance and final approval of interconnection installation

	erconnection installation is approved and the Small Generator Facility is approved for operation the terms and conditions of the PUC rules and a duly signed and executed Interconnection nent:
Black F	lills Electric Cooperative waives Witness Test? (Initial) Yes () No ()
If not v	vaived, date of successful Witness Test: Passed: (Initial) ()
BHEC S	ignature: Date:
Printed	Name:
Title: _	
Locatio	on on grid: East (HM, FB, SC, RV, MM) West (AN, BB, PR, DU, HQ, CL, PV)
<u>Final cl</u>	necklist for cooperative inspection
	Change meter to bi-directional meter or reprogram to record delivered and received use
	Disconnect and voltage test for power feedback
	Wire through CT and/or check wiring for solar only with heat meter(s)
	Determine if compliance equipment is necessary
	Check box for extra material needed for solar connect
	Supply billing information to accounting department

## **Glossary of Terms**

**Avoided Cost** - A calculation that estimates the expense of an electric utility incurs to supply or generate a certain amount of power. In practice, it refers to the price that qualifying facilities under the Public Utility Regulatory Policies Act of 1978 are entitled to receive for excess power sold to a utility. Avoided Cost is established at the price a utility would have paid for power had it not purchased the power from a qualifying facility.

Cooperative – Black Hills Electric Cooperative, Inc.

**Delivery Point** - The defined location where the Cooperative receives the delivery of electrical power from the IPP. The Delivery Point may be at the meter, or another location defined in the agreement, with adjustments for estimated losses between the meter and the Delivery Point.

**Distributed Generation (DG)** - Distributed generation technologies designed to supplement or replace power produced by large generating plants. In most cases, distributed generation is located at or near the point of use. For the purposes of this Agreement, examples include standby, or emergency, generators that run on gasoline, diesel fuel, or natural gas and "backyard" renewable energy systems such as anaerobic digesters, small wind turbines, rooftop or ground mount solar photovoltaic arrays, battery storage, and micro-hydro projects.

**Electric Distribution System (EDS)** – the facilities and equipment used to transmit electricity to ultimate usage points.

**Energy** - Electric energy generated by the IPP and available for delivery to the Delivery Point, which shall exclude the electric energy consumed by the IPP, and shall be in the form of sixty (60) Hertz, alternating current meeting the Cooperative's Rules.

**Force Majeure event** - (a) that is beyond the reasonable control of the affected party; and (b) that the affected party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent that they satisfy the preceding requirements: acts of war, public disorder, rebellion or insurrection; floods, hurricanes, earthquakes, lighting, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage.

**Generation** - The production of electricity using fuels such as coal, natural gas, oil, and uranium or from renewable sources such as biomass, geothermal, hydro, hydrokinetic (ocean wave and tidal), solar, or wind.

**Grid** - A network of synchronized power providers and consumers that are connected by transmission and distribution lines and operated by one or more control centers.

*Interconnection* - The equipment and facilities required to safely and reliably permit the flow of electricity from the IPP to the Cooperative's system.

**Interconnection agreement** – an agreement between an applicant or interconnection customer and the interconnecting Electric Utility that governs the connection of the small generator facility to the

Electric Utility's EDS, as well as the ongoing operation of the Small Generator Facility after it is connected to the system.

**Kilowatt (kW)** - The basic unit of electric demand, equal to 1,000 Watts. A measure of both a utility's capacity and a consumer's demand or load.

*Kilowatt-hour (kWh)* - A unit of energy or work equal to 1,000 Watt-hours. The basic measure of electric energy use.

**Meter** - An instrument and associated equipment meeting applicable electric industry standards used to measure and record the quantity and the required delivery characteristics of Energy and Station Service delivered to the Cooperative or the IPP.

**Nameplate Rating** - The maximum capacity of electrical equipment or a generator as rated by the manufacturer and stated on the nameplate attached to the equipment.

**National Electrical Code (NEC)** - A regionally adopted standard for the safe installation of electrical wiring and equipment in the United States NEC is part of the National Fire Code series published by the National Fire Protection Association.

**National Electrical Safety Code (NESC)** - A United States standard of the safe installation, operation, and maintenance of electric power and communication utility systems including power substations, power and communication overhead lines, and power and communication underground lines. Electric cooperatives that are USDA Rural Utilities Service borrowers must comply with all sections of the code.

Outage - Interruption of electrical service.

**Power Factor** - The ratio between real power (electricity used) and apparent power (the amount of electricity provided) in a circuit, expressed as a number between 0 and 1. When the voltage and current are entirely in sync, electric cooperatives achieve a 100 percent power factor (or 1).

**Voltage** - An electromotive force or potential difference expressed in volts that causes electrons to flow. Voltage measures the potential for current flow and may exist between objects without an actual flow of current.