Operational Procedure 5-1-5-O-3

Interconnect Application for Inverter-Based Distributed Generation Resource (DGR) No Larger than 100 kW

This Application is considered complete when the member provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee

A non-refundable processing fee must accompany this Application. The amount of the fee is listed in Cooperative's Service Rules and Regulations, Appendix A, Section 207.

Interconnection Member

Member/Owner
Name: _____
Mailing Address: _____
City: _____County: _____ State: _____Zip Code: _____
Phone Number: _____Representative: _____
Email Address: _____ Fax Number: _____

Contact (if different from Interconnection Member)

Name: _____
Mailing Address: _____
City: _____County: _____ State: _____Zip Code: _____
Phone Number: _____Representative: _____
Email Address: _____ Fax Number: _____

Owner(s) of the facility (include % ownership by any electric utility):

_____

_____

Generation Facility (DGR) Information

Location (if different from above):

_____

Is there a system controller or gateway between the inverter and utility? If so, please provide:
Gateway Manufacturer: _____ Model: _____
Nameplate Rating: _____(AC Volts) _____(AC Amps) Single-Phase ____ Three-Phase ____
Inverter Manufacturer: _____Model: _____
Nameplate Rating: _____ (kW) _____ (kVA) ← AC Rating of Inverter
(AC Volts) _____ Single-Phase ___ Three-Phase ____
System Design Capacity: _____ (kW) _____ (kVA) ← Rating of PV, wind, and battery
Prime Mover: Photovoltaic ___ Turbine ___ Other ___
Energy Source: Solar: ___ Wind: ___ Other (describe): _____ ____ Battery: _____
If battery is included in the system does it connect to the inverter above? _____
Or does it have its own inverter? _____

Is the equipment UL1741 Listed? Yes No

If yes, attach manufacturer's datasheet showing UL1741 listing and include certificate of UL listing. (If No, the equipment is not approved for installation.)

Estimated Installation Date: _____ Estimated In-Service Date: _____

The 100 kW Inverter Process is available only for inverter-based generation facilities no larger than 100 kW that meet the codes, standards, and certification requirements of Exhibits A and B, or if the Cooperative has reviewed the design or tested the proposed DGR and is satisfied that it is safe to operate.

List components of the DGR equipment package that are currently certified:

Equipment Type	Manufacturer	Model	Certifying Entity

Application is for: _____ Net Metering Rate

_____ Net Billing Rider (Sell-All)

** Please attach and send in a one-line electrical diagram of the renewable energy system depicting the locations of the DC rapid shutdown device, AC disconnect switch and meter(s) along with this Application.

***A lockable AC disconnect switch with visible open is required between all generation and the utility and it must be located within five feet (5') of the utility meter.

Interconnection Member Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions, Exhibit C, and return the Certificate of Completion, Exhibit D, when the DGR has been installed. I further agree to relinquish my claims to any Renewable Energy Credit (REC) that will be granted with my equipment as part of this agreement.

Signature: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the DGR (For Cooperative use only)

Interconnection of the DGR is approved contingent upon the Terms and Conditions (Exhibit C) and return of the Certificate of Completion (Exhibit D).

Cooperative Representative Signature: _____

Title: _____ Date: _____

Application ID number: _____

Cooperative waives inspection/witness test? Yes ___No ___

Cooperative Contact for Application Submission

Blue Ridge Energy
Attention: Energy Solutions Manager
Address: P.O. Box 112, Lenoir, NC 28645-0112
Telephone Number: 1-800-451-5474
Fax: (828) 758-2699
Email Address: renewableenergy@myblueridgeenergy.com

Date Adopted: 05/2017
Dates Revised: 05/2021

Exhibit A
Certification Codes and Standards

When the stated versions of the following codes and standards are superseded by an approved revision, the revision shall apply.

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Standard 929-2000, IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA (2020) National Electrical Code (NEC)

ANSI C2-2017 National Electric Safety Code (NESC), published by IEEE

IEEE Standard C37.90.1-2012, IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Standard C37.90.2-2004, IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Standard C37.108-2002, IEEE Guide for the Protection of Network Transformers

IEEE Standard C57.12.44.2014, IEEE Standard Requirements for Secondary Network Protectors

IEEE Standard C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Standard C62.45-2002, IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-2020, Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Standard 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

NEMA MG 1-2017, Motors and Small Resources, Revision 3

IEEE Standard 519-2014, IEEE Recommended Practices and Requirements for Harmonic Controlin Electrical Power Systems

Exhibit B
Certification

DGR equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if all of the following conditions are met:

1. It has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards; see https://www.osha.gov/nationally-recognized-testing-laboratory-program/current-list-of-nrtls

2. It has been labeled and is publicly listed by such NRTL at the time of the Application; and

3. Such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

Additional requirements related to Certification include the following:

1. The Interconnection Member must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

2. Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for on-site commissioning and acceptance testing by the parties to the interconnection nor follow-up production testing by the NRTL.

3. If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Member must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

4. Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing, or additional equipment on the Member side of the point of interconnection shall be required to meet the requirements of this interconnection procedure.

5. An equipment package does not include equipment provided by the Cooperative.

The use of certified equipment does not automatically qualify the Interconnection Member to be interconnected to the Cooperative's distribution system. An Application will still need to be submitted and an interconnection review may still need to be performed to determine the compatibility of the DGR with the Cooperative's distribution system.

Exhibit C
Terms and Conditions

Construction of the Facility

The Interconnection Member (the "Member") may proceed to construct the DGR when Blue Ridge Energy (the "Cooperative") approves the interconnection request (the "Application") and provides notice of approval to the Member.

Interconnection and Operation

The Member may operate the DGR and interconnect with the Cooperative's Distribution System once all of the following have occurred:

- Upon completing construction, the Member causes the DGR to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

- The Member returns the Certificate of Completion to the Cooperative, and

- The Cooperative has exercised one of the following two options:

    - Completed its inspection and witness test of the DGR to ensure that all equipment has been appropriately installed, that all electrical connections have been made in accordance with applicable codes, and that operation of the DGR is in compliance with applicable interconnection standards. All inspections and testing must be conducted by the Cooperative after receipt of the Certificate of Completion and shall take place at a time agreeable to all Parties. The Cooperative shall provide a written statement that the DGR has passed inspection and the witness test or shall notify the Member of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

    - The Cooperative waives the right to inspect the DGR.

The Cooperative has the right to disconnect the DGR in the event of improper installation or failure to return the Certificate of Completion.

Revenue quality metering equipment must be installed and tested in accordance with applicable ANSI standards.

Safe Operations and Maintenance

The Member shall be fully responsible for operating, maintaining, and repairing the DGR as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

Access

The Cooperative shall have access to the disconnect switch[1] and metering equipment of the DGR at all times. The Cooperative shall provide reasonable notice to the Member, when possible, prior to using its right of access.

Disconnection

The Cooperative may temporarily disconnect the DGR upon the following conditions:

- For scheduled outages upon reasonable notice.
- For unscheduled outages or emergency conditions.
- If the DGR does not operate in the manner consistent with these Terms and Conditions; and
- The Cooperative shall inform the Member in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

Indemnification

The Parties shall at all times indemnify, defend, and save the other Party harmless from any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties arising out of or resulting from the other Party's actions or inactions of its obligations under this agreement on behalf of the

[1] A disconnect switch isolates the DG equipment for purposes of safety during maintenance and emergency conditions. The Cooperative requires a disconnect device to be provided, installed by, and paid for by the Member, accessible to and lockable by Cooperative personnel on the secondary voltage level, The lockable safety switch (no breaker) must provide a visible open. The switch must be clearly labeled as:
PV System Disconnect
Warning!
Electric Shock Hazard
Terminals on the line and land side may be energized in the open position.

indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

Insurance

In connection with the Member's performance of its duties and obligations under this Agreement, the Member shall obtain and continually maintain, during the term of the Agreement, general liability insurance written on a standard occurrence form or other form acceptable to the Cooperative, covering bodily injury and property damage liability with a combined single limit of at least $300,000 for each occurrence.

The Member shall furnish the required insurance certificates and endorsements to the Cooperative prior to the initial operation of the DGR. Thereafter, the Cooperative shall have the right to periodically inspect or obtain a copy of the original policy or policies of insurance.

Failure of the Member or Cooperative to enforce the minimum levels of insurance does not relieve the Member from maintaining such levels of insurance and shall in no way relieve or limit the Member's obligations and liabilities under other provisions of this Agreement.

All insurance certificates, endorsements, cancellations, terminations, alterations, and material changes of the general liability insurance required shall be issued and submitted to the Cooperative.

Limitation of Liability

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under the Indemnification section above.

Termination

The agreement to operate in parallel may be terminated under the following conditions:

- **By the Member** - By providing written notice to the Cooperative; or

- **By the Cooperative -** If the DGR fails to operate for any consecutive 12-month period, or the Member fails to remedy a violation of these Terms and Conditions.

In the event this Agreement is terminated, the Cooperative shall have the right to disconnect its facilities or direct the Member to disconnect its DGR; or allow this Agreement to continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arise under the Agreement.

Assignment/Transfer of Ownership of the Facility

This Agreement shall survive the transfer of ownership of the DGR to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Cooperative.

Exhibit D
Certificate of Completion

Is the DGR owner-installed? Yes_____ No _____

Member/Owner
Name: _____
Mailing Address: _____
City: _____County: _____ State: _____Zip Code: _____
Phone Number: _____Representative: _____
Email Address: _____ Fax Number: _____

Location of the DGR (if different from above):

_____
City: _____County: _____ State: _____Zip Code: _____
Phone Number: _____Representative: _____
Email Address: _____ Fax Number: _____

Electrician:
City: _____County: _____ State: _____Zip Code: _____
Phone Number: _____Representative: _____
Email Address: _____ Fax Number: _____

License number: _____

Date of Approval to Install Facility granted by the Cooperative: _____

Application ID number: _____

Inspection:

The DGR has been installed and inspected in compliance with the local building/electrical code of _____ (County/City)

Signature (Local electrical wiring inspector, or attach signed electrical inspection):

_____

Print Name: _____ Date: _____

As a condition of interconnection, you are required to send/fax a copy of this form, along with a copy of the signed electrical permit, to:

Blue Ridge Energy
Attention: Energy Solutions Manager
Address: P.O. Box 112, Lenoir, NC 28645-0112
Telephone Number: 1-800-451-5474
Fax: (828) 758-2699
Email Address: renewableenergy@myblueridgeenergy.com

Energizing the DGR is approved contingent upon the Terms and Conditions of this Procedure.

Cooperative Representative Signature: _____

Title: _____ Date: _____