

**APPALACHIAN ELECTRIC COOPERATIVE  
SERVICE POLICIES**

**POLICY NO. 1900  
ATTACHMENT 5**

**INTERCONNECTION AND PARALLEL OPERATION AGREEMENT  
FOR DISTRIBUTED GENERATION  
TIER LEVELS 5 & 6 (50kW and Greater)**

This Interconnection and Parallel Operation Agreement (“Agreement”) is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by Appalachian Electric Cooperative (AEC), a corporation organized under the laws of the State of Tennessee, and \_\_\_\_\_ (“DG Owner/Operator”), 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:

**1. Scope of Agreement** – This Agreement is applicable to conditions under which AEC and the DG Owner/Operator agree that a generating facility (described in Exhibit A) owned by the DG Owner/Operator of \_\_\_\_\_ kW, to be interconnected at \_\_\_\_\_ kV to AEC’s electric power transmission/distribution system (“System”).

**2. Establishment of Point of Interconnection** – The point where the electric energy first leaves the wires or equipment owned by DG Owner/Operator and enters the wires or equipment owned by AEC is the “Point of Interconnection.” AEC and DG Owner/Operator agree to interconnect the Facilities at the Point of Interconnection in accordance with AEC’s rules, regulations, by-laws, rates, and tariffs (the “Rules”) which are incorporated herein by reference. The interconnection equipment installed by the DG Owner/Operator (“Interconnection Facilities”) shall be in accordance with the Rules as well.

**3. Responsibilities of AEC and DG Owner/Operator for Installation, Operation and Maintenance of Facilities** – DG Owner/Operator will, at its own cost and expense, install, operate, maintain, repair, and inspect, and shall be fully responsible for, its Facilities and Interconnection Facilities, unless otherwise specified on Exhibit A. DG Owner/Operator shall conduct operations of its Facilities and Interconnection Facilities in compliance with all aspects of the Rules and in accordance with industry standard prudent engineering practice, including, without limitation, standard IEEE 1547. AEC shall conduct operations of its electric transmission/distribution facilities in compliance with all aspects of the Rules, or as further described and mutually agreed to in the applicable Facilities Schedule attached hereto as Exhibit A. Maintenance of Facilities and Interconnection Facilities shall be performed in accordance with the applicable manufacturers’ recommended maintenance schedule. The DG Owner/Operator agrees to cause its Facilities and Interconnection Facilities to be constructed in accordance with the Rules and specifications equal to or better than those provided by the National Electrical Safety Code and the National Electrical Code, both codes approved by the American National Standards Institute, in effect at the time of construction.

The DG Owner/Operator covenants and agrees to cause the design, installation, maintenance, and operation of, its Facilities and Interconnection Facilities so as to reasonably minimize the likelihood of a malfunction or other disturbance, damaging or otherwise affecting or impairing the System. The DG Owner/Operator will be required to pay for system impact study and any upgrades required by AEC. DG Owner/Operator 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 and Interconnection Facilities.

AEC will notify DG Owner/Operator if there is evidence that the Facilities' or Interconnection Facilities' operation causes disruption or deterioration of service to other customers served from the System or if the Facilities' or Interconnection Facilities' operation causes damage to the System. DG Owner/Operator will notify AEC of any emergency or hazardous condition or occurrence with the DG Owner/Operator's Facilities or Interconnection Facilities, which could affect safe operation of the System.

**4. Operator in Charge** – The DG Owner/Operator shall each identify an individual (by name or title) who will perform as “Operator in Charge” of the Facilities and the DG Owner/Operator portion of the Interconnection Facilities. This individual must be familiar with this Agreement as well as provisions of the Rules and any other agreements or regulations that may apply.

**5. Power Sales to AEC** - Interconnection of the Facilities with the System does not grant the DG Owner/Operator the right to export power nor does it constitute an agreement by AEC to purchase or wheel excess power.<sup>1</sup>

## **6. Limitation of Liability and Indemnification**

a. Notwithstanding any other provision in this Agreement, with respect to AEC's provision of electric service to DG Owner/Operator and the services provided by AEC pursuant to this Agreement, AEC's liability to DG Owner/Operator shall be limited as set forth in AEC's tariffs and terms and conditions for electric service, which are incorporated herein by reference.

b. For the purposes of this Agreement, a Force Majeure event is any 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, lightning, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage. 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.

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<sup>1</sup> If the DG Owner/Operator wishes to export power, separate agreements must be in place with TVA for Power Purchase or Transmission Service.

c. Notwithstanding Paragraph 5.b of this Agreement, the DG Owner/Operator shall assume all liability for and shall indemnify AEC 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 DG Owner/Operator's negligence or other wrongful conduct in connection with the design, construction, installation, operation or maintenance of the Facilities or Interconnection 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. AEC and DG Owner/Operator shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. AEC does not assume any duty of inspecting the DG Owner/Operator's lines, wires, switches, or other equipment or property and will not be responsible therefore. DG Owner/Operator 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 DG Owner/Operator and AEC, only with AEC prior written authorization are the connections between AEC's service wires and the DG Owner/Operator's service entrance conductors to be energized.

**7. Testing and Testing Records** – The DG Owner/Operator shall provide to AEC all records of testing. Testing of protection systems for intermediate and large units shall be limited to records of compliance with standard acceptance procedures and by industry standards and practices. These records shall include testing at the start of commercial operation and periodic testing thereafter. Factory testing of pre-packaged Interconnection Facilities and the protective systems of small units shall be acceptable. In the case of a factory test, the DG Owner/Operator needs to provide a written description and certification by the factory of the test, the test results, and the qualification of any independent testing laboratory. In addition, the settings of the equipment being installed are to be approved by AEC prior to DG operation.

**8. Right of Access, Equipment Installation, Removal & Inspection** – AEC may send an employee, agent or contractor to the premises of the DG Owner/Operator at any time whether before, during or after the time the Facilities first produce energy to inspect the Facilities and Interconnection Facilities, and observe the Facility's installation, commissioning (including any testing), startup, operation, and maintenance.

At any time AEC shall have access to DG Owner/Operator's premises for any reasonable purpose in connection with the interconnection described in this Agreement, the Rules, or to provide service to its customers.

**9. Disconnection of Facilities** – DG Owner/Operator retains the option to disconnect its Facilities from the System, provided that DG Owner/Operator notifies AEC of its intent to disconnect by giving AEC at least thirty (30) days' prior written notice. Such disconnection **shall**

not be a termination of this Agreement unless DG Owner/Operator exercises rights under Section 12 that do not lead to a resolution of the issue.

DG Owner/Operator shall disconnect Facilities from the System upon the effective date of any termination resulting from and required by actions under Section 12.

AEC shall have access to and the right to disconnect or cause the DG Owner/Operator to disconnect the Facilities from the System and suspend service in cases where continuance of service to DG Owner/Operator will endanger persons or property. During the forced outage of the System serving DG Owner/Operator, AEC shall have the right to suspend service and disconnect or cause the DG Owner/Operator to disconnect the Facilities from the System to effect repairs on the System, but AEC shall use its reasonable efforts to provide the DG Owner/Operator with reasonable prior notice.

**10. Metering** – AEC shall purchase, own, install and maintain such metering equipment as may be necessary to meter the electrical output of the Facilities in accordance with Section 9. All costs associated therewith shall be borne by the DG Owner/Operator. Metering shall meet accuracy standards required for equivalent electrical services and can be done with standard meters or any devices that meet data collection and accuracy requirements. For Facilities greater than 200 kW, telemetry may be required by AEC to monitor real-time output and other DG functions for large and medium generators that are operated remotely<sup>2</sup>. Telemetry data shall be available to AEC and the communication of such data shall be compatible with AEC’s communication methods.

**11. Insurance** – DG Owner/Operator shall carry adequate insurance coverage that shall be acceptable to AEC.

**12. 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) DG Owner/Operator may terminate this Agreement at any time by giving AEC at least sixty (60) days’ written notice; (b) AEC may terminate upon failure by the DG Owner/Operator to generate energy from the Facilities within six (6) months after completion of the interconnection; (c) either Party may terminate by giving the other Party at least thirty (30) 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 AEC, so long as the notice specifies the basis for termination and there is opportunity to cure the default; (d) AEC may terminate by giving DG Owner/Operator at least sixty (60) days notice in the event that there is a material change in an applicable law, or any requirement of AEC’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.

**13. Compliance with Laws, Rules and Tariffs** – Both AEC and the DG Owner/Operator shall be responsible for complying with the laws of the state, and the Rules. The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Rules, which Rules are hereby incorporated into this Agreement by this reference. AEC shall have the right to publish changes in any of the Rules at any time.

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<sup>2</sup> Telemetry is not required if it is prevented via protective relaying from injecting energy into AEC distribution system.

14. **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.

15. **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.

16. **Entirety of Agreement and Prior Agreements Superseded** – This Agreement, including the Rules and all attached Exhibits and Facilities Schedules, which are expressly made a part hereof for all purposes, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the facilities of the Parties at the Points of Interconnection expressly provided for in this Agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the subject matter hereof not set forth or provided for herein or in the DG Owner/Operator application, or other written information provided by the DG Owner/Operator in compliance with the Rules. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement.

17. **Assignment** – At any time during the term of this Agreement, the DG Owner/Operator may assign this Agreement to a corporation, an entity with limited liability or an individual (the “Assignee”) to whom the DG Owner/Operator transfers ownership of the Facilities; provided that the DG Owner/Operator obtains the consent of AEC in advance of the assignment. AEC’s consent will be based on a determination that the Assignee is financially and technically capable to assume ownership and/or operation of the Facilities, which will not be unreasonably withheld. The company or individual to which this Agreement is assigned will be responsible for the proper operation and maintenance of the Facilities, and must agree in writing to be subject to all provisions of this Agreement. AEC may also assign the Agreement to another entity with the written approval of the DG Owner/Operator.

18. **Notices** – Notices given under this Agreement are deemed to have been duly delivered if hand delivered or sent by United States certified mail, return receipt requested, postage prepaid, to:

(a) If to Appalachian EC:

Appalachian EC  
P.O. Box 400  
New Market, TN 37820-0400  
1109 Hill Drive  
New Market, TN 37820

(b) If to DG Owner/Operator:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The above-listed names, titles, and addresses of either Party may be changed by written notification to the other, notwithstanding Section 18.

**19. Invoicing and Payment** – Invoicing and payment terms for services associated with this Agreement shall be consistent with applicable Rules.

**20. Limitations (No Third-Party Beneficiaries, Waiver, etc.)** – 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 DG Owner/Operator without the prior written consent of AEC as specified in Section 16. 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.

**21. Headings** – The descriptive headings of the various articles and sections of this Agreement have been inserted for convenience of reference only and are to be afforded no significance in the interpretation or construction of this Agreement.

**22. Multiple 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.

**APPALACHIAN EC**

\_\_\_\_\_  
**DG OWNER/OPERATOR**

**BY:** \_\_\_\_\_

**BY:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**EXHIBIT A**  
**LIST OF FACILITIES SCHEDULES AND POINTS OF INTERCONNECTION**

Facility Schedule No.

Location of Point of Interconnection

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*DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for its Facilities, unless otherwise specified on Exhibit A.*

**FACILITIES SCHEDULE NO.**

The following information is to be specified for each Point of Interconnection, if applicable.

1. Name:
2. Facilities location:
3. Delivery voltage:
4. Metering (voltage, location, losses adjustment due to metering location, and other:
5. Normal Operation of Interconnection:
6. One line diagram attached (check one):/\_\_\_\_\_ Yes /\_\_\_\_\_ No
7. Facilities to be furnished by AEC:
8. Facilities to be furnished by DG Owner/Operator:
9. Cost Responsibility:
10. Control area interchange point (check one): /\_\_\_\_\_ Yes /\_\_\_\_\_ No
11. Supplemental terms and conditions attached (check one): /\_\_\_\_\_ Yes /\_\_\_\_\_ No
12. AEC rules for DG interconnection attached (check one): /\_\_\_\_\_ Yes / \_\_\_\_\_ No

APPALACHIAN ELECTRIC COOPERATIVE  
OWNER/OPERATOR

DG OWNER/OPERATOR

BY:\_\_\_\_\_

BY:\_\_\_\_\_

TITLE:\_\_\_\_\_

TITLE:\_\_\_\_\_

DATE:\_\_\_\_\_

DATE:\_\_\_\_\_

**EXHIBIT B**  
**APPLICATION FOR INTERCONNECTION TO AEC**

The Customer or his designated representative shall supply the following information.

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

Service Address: \_\_\_\_\_

Type (Synchronous, Induction, photo-voltaic, micro-turbine, fuel cell etc.) \_\_\_\_\_

Amount of power to be exported. \_\_\_\_\_ kW

No. of Generators \_\_\_\_\_ Manufacturer \_\_\_\_\_ Model No: \_\_\_\_\_

kW Rating \_\_\_\_\_ kVA Rating \_\_\_\_\_ Power Factor \_\_\_\_\_

Connection Voltage: \_\_\_\_\_ Number of Phases: \_\_\_\_\_ Frequency: \_\_\_\_\_

Description of normal operation of distributed generation: (examples: provide power to meet base load, demand management, provide standby power)

\_\_\_\_\_  
\_\_\_\_\_

Is one line diagram attached? \_\_\_\_\_ Is disconnect device location shown? \_\_\_\_\_

Is list of specifications on protective devices attached? \_\_\_\_\_

Expected Start-up Date: \_\_\_\_\_

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature \_\_\_\_\_ Date: \_\_\_\_\_

Address \_\_\_\_\_

Phone Number: \_\_\_\_\_ e-mail: \_\_\_\_\_

Fax: \_\_\_\_\_

Application Fee Attached? \_\_\_\_\_

Return completed application to: Appalachian Electric Cooperative, Member Services  
Department

**EXHIBIT C**  
**PROJECT BACKGROUND**

AEC provides electric utility services for portions of Jefferson, Grainger, Hamblen and Sevier Counties in Tennessee. DG Owner/Operator wishes to construct a \_\_\_\_\_ production facility (the “Facilities”) within the service territory of AEC. DG Owner/Operator has entered into a \_\_\_\_\_ Contract dated \_\_\_\_\_, with the Tennessee Valley Authority (“TVA”) for TVA to purchase the electric power output from the Facilities. DG Owner/Operator wishes to enter into this agreement with AEC for the purposes of designing and installing an interconnection between the Facilities and AEC transmission/distribution facilities (the “Interconnection”) to permit delivery of the electric power output from the Facilities to TVA. DG Owner/Operator has completed an Application for Interconnection to AEC along with supporting documents, attached as Exhibit B and application fee. \_\_\_\_\_ has completed a System Impact Study for Co-Gen Facility (the “System Impact Study”) addressing interconnection and coordination issues as noted in System Impact Study’s Scope of Services.