

Roanoke Electric Cooperative

Application for Operation of Customer-Owned Generation

This application should be completed and returned to the Cooperative Customer Service representative in order to begin processing the request.

INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Customer interface. Every effort should be made to supply as much information as possible.

PART 1

OWNER/APPLICANT INFORMATION

Owner/Customer

Name: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

PROJECT DESIGN/ENGINEERING (ARCHITECT) (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

ELECTRICAL CONTRACTOR (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

Standard Interconnection Agreement

Roanoke EMC and _____

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20110225



TYPE OF GENERATOR (as applicable)

Photovoltaic _____ Wind _____ Microturbine _____
Diesel Engine _____ Gas Engine _____ Combustion Turbine _____
Other _____

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ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION

The following information is necessary to help properly design the Cooperative customer interconnection.
This information is not intended as a commitment or contract for billing purposes.

Total Site Load _____ (kW)
Residential _____ Commercial _____ Industrial _____
Generator Rating _____ (kW) Annual Estimated Generation _____ (kWh)

Mode of Operation

Isolated _____ Paralleling _____ Power Export _____

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DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including a detailed description of its planned location, the date you plan to operate the generator, the frequency with which you plan to operate it and whether you plan to operate it during on or off-peak hours.

PART 2

(Complete all applicable items. Copy this page as required for additional generators)

SYNCHRONOUS GENERATOR DATA

Unit Number: _____ Total number of units with listed specifications on site: _____
Manufacturer: _____
Type: _____ Date of manufacture: _____
Serial Number (each): _____
Phases: Single Three R.P.M.: _____ Frequency (Hz): _____
Rated Output (for one unit): _____ Kilowatt _____ Kilovolt-Ampere
Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____

Field Volts: _____ Field Amps: _____ Motoring power (kW): _____
 Synchronous Reactance (Xd): _____ % on _____ KVA base
 Transient Reactance (X'd): _____ % on _____ KVA base
 Subtransient Reactance (X''d): _____ % on _____ KVA base
 Negative Sequence Reactance (Xs): _____ % on _____ KVA base
 Zero Sequence Reactance (Xo): _____ % on _____ KVA base
 Neutral Grounding Resistor (if applicable): _____

I_2^2t or K (heating time constant): _____
 Additional information: _____

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INDUCTION GENERATOR DATA

Rotor Resistance (Rr): _____ ohms Stator Resistance (Rs): _____ ohms
 Rotor Reactance (Xr): _____ ohms Stator Reactance (Xs): _____ ohms
 Magnetizing Reactance (Xm): _____ ohms Short Circuit Reactance (Xd''): _____ ohms
 Design letter: _____ Frame Size: _____
 Exciting Current: _____ Temp Rise (deg C^o): _____
 Reactive Power Required: _____ Vars (no load), _____ Vars (full load)
 Additional information: _____

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PRIME MOVER (Complete all applicable items)

Unit Number: _____ Type: _____
 Manufacturer: _____
 Serial Number: _____ Date of manufacture: _____
 H.P. Rated: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft.²
 Energy Source (hydro, steam, wind, etc.) _____

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GENERATOR TRANSFORMER (Complete all applicable items)

TRANSFORMER (between generator and utility system)
 Generator unit number: _____ Date of manufacturer: _____
 Manufacturer: _____
 Serial Number: _____
 High Voltage: _____ KV, Connection: delta wye, Neutral solidly grounded? _____
 Low Voltage: _____ KV, Connection: delta wye, Neutral solidly g rounded? _____
 Transformer Impedance(Z): _____ % on _____ KVA base.
 Transformer Resistance (R): _____ % on _____ KVA base.
 Transformer Reactance (X): _____ % on _____ KVA base.
 Neutral Grounding Resistor (if applicable): _____

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INVERTER DATA (if applicable)

Manufacturer: _____ Model: _____
 Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____
 Inverter Type (ferroresonant, step, pulse-width modulation, etc): _____

Type commutation: forced line

Harmonic Distortion: Maximum Single Harmonic (%) _____
Maximum Total Harmonic (%) _____

Note: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.

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POWER CIRCUIT BREAKER (if applicable)

Manufacturer: _____ Model: _____
Rated Voltage (kilovolts): _____ Rated ampacity (Amperes) _____
Interrupting rating (Amperes): _____ BIL Rating: _____
Interrupting medium / insulating medium (ex. Vacuum, gas, oil) _____ / _____
Control Voltage (Closing): _____ (Volts) AC DC
Control Voltage (Tripping): _____ (Volts) AC DC Battery Charged Capacitor
Close energy: Spring Motor Hydraulic Pneumatic Other: _____
Trip energy: Spring Motor Hydraulic Pneumatic Other: _____
Bushing Current Transformers: _____ (Max. ratio) Relay Accuracy Class: _____
Multi ratio? No Yes: (Available taps) _____

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ADDITIONAL INFORMATION

In addition to the items listed above, please attach a detailed one-line diagram of the proposed facility, all applicable elementary diagrams, major equipment, (generators, transformers, inverters, circuit breakers, protective relays, etc.) specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the interconnection. Also describe the project's planned operating mode (e.g., combined heat and power, peak shaving, etc.), and its address or grid coordinates.

END OF PART 2

SIGN OFF AREA

The customer agrees to provide the Cooperative with any additional information required to complete the interconnection. The customer shall operate his equipment within the guidelines set forth by the cooperative.

Applicant

Date

ELECTRIC COOPERATIVE CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

Cooperative contact: George Stamper
Title: Vice-President of Engineering
Address: Roanoke Electric Cooperative
PO Box 1326
Ahoskie, NC 27910
Phone: 252-209-2241
Fax: 252-209-5049
e-mail: gstamper@roanokeelectric.com

**STANDARD INTERCONNECTION AGREEMENT
BETWEEN
ROANOKE ELECTRIC MEMBERSHIP CORPORATION
AND _____**

This STANDARD INTERCONNECTION AGREEMENT, (the "Agreement"), is entered into as of _____, 20____, (the "Effective Date"), by and between _____ ("Owner/Operator"), and Roanoke Electric Membership Corporation ("Cooperative"). Owner/Operator and Cooperative are hereinafter referred to collectively as the "Parties" or individually as a "Party." In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1. INTENT:

- 1.1. It is the intent of the Parties to interconnect Owner/Operator's electric power generation system, located at or near _____ ("Generator") and related equipment ("Interconnection Facilities") to Cooperative's electrical distribution system ("System") and for Owner/Operator to sell any surplus Generator power to Cooperative as per the applicable Cooperative rate rider.
- 1.2. It is the intent of Cooperative to operate its distribution system in such a manner as to provide and maintain a high level of service to its customers, to maintain a high level of power quality, and to ensure its distribution operates properly.
- 1.3. It is the intent of both parties to operate their respective facilities in a way which ensures the safety of the public and their employees.

2. SCOPE OF AGREEMENT:

- 2.1. This Agreement relates solely to the conditions under which Cooperative and Owner/Operator agree that Owner/Operator's Generator may be interconnected to the System. This Agreement does not authorize Owner/Operator to export power or constitute an agreement to purchase or wheel Owner/Operator's power, and this Agreement is not intended to replace Cooperative's Bylaws, Service Rules and Regulations, or other rules and policies of general applicability. Other services that Owner/Operator may require from Cooperative shall be covered under separate agreements.
- 2.2. Cooperative will supply the electrical requirements of Owner/Operator which are not supplied by Owner/Operator's Generator. Such electric service shall be supplied to Owner/Operator under Cooperative's rates, schedules, and service regulations applicable to Owner/Operator's class of service.

- 3. **OPERATOR IN CHARGE:** Owner/Operator shall identify an individual (by name or title) who will perform as "Operator in Charge" of the Generator and Interconnection Facilities. This individual must be familiar with this Agreement as well as the Rules and any other agreements, laws, codes or regulations that apply to this Agreement and the interconnection of the Generator and will be the contact person with respect to technical matters concerning the Generator and Interconnection Facilities. The operator in charge, including contact information, for Owner/Operator is -

Office Telephone: _____

Cell Phone: _____
Email: _____
Facsimile: _____
Other contact information: _____

4. PURCHASE OF EXCESS GENERATOR POWER:

4.1.1. If the capacity of the Generator is less than 500 KW, the energy output from the Generator will be credited at the Cooperative's predetermined avoided cost rate against Owner/Operator's power invoice. Should the credit exceed what would otherwise be the invoice amount, Cooperative may choose to either carry the credit forward to subsequent invoices, or directly pay Owner/Operator at the Cooperative's predetermined avoided cost rate for such excess energy.

4.1.2. If the capacity of the Generator is 500 KW or above, the energy output will be purchased by Cooperative's wholesale power provider, at its avoided cost, and there will be no netting of such purchases against Owner/Operator's charges for electric service under Section 4.1.1, above.

5. STUDIES/COOPERATION:

5.1. Interconnection with the Cooperative's system is conditioned upon completion of all required engineering and transmission studies and processes necessary and advisable in the course of determining the impact of the Generator on the System and Cooperative's transmission provider (the "Studies). Owner/Operator agrees to provide full and complete cooperation with the Cooperative, its wholesale power provider and its transmission provider to facilitate the Studies.

5.2. Prior to interconnection of any of Owner/Operator's Generator and/or Interconnection Facilities, Owner/Operator shall provide Cooperative with all genset characteristics, proposed relay settings, schematic diagrams, logic diagrams and operational sequence descriptions for the Generator and Interconnection Facilities. Owner/Operator shall allow adequate time for review, coordination testing and approval prior to interconnection. In the event the above information is modified, amended, supplemented or otherwise altered, Owner/Operator agrees to provide such new information as soon as is practicable, but in no event less than ten (10) days prior to implementation of such change.

5.3. Prior to interconnection of any of Owner/Operator's Facilities and Interconnection Facilities, Owner/Operator shall install such additional features as Cooperative may reasonably determine are required for the safety of Cooperative personnel during normal and emergency operating conditions or to avoid adverse effects to power quality and reliability for members of Cooperative.

5.4. In the event any modifications or improvements are or need to be made to existing Cooperative equipment or new equipment is added to the System to facilitate Owner/Operator's interconnection, Owner/Operator agrees Cooperative will have the option, in its sole discretion, to perform such work itself or designate an entity to perform such work, and Owner/Operator agrees to reimburse Cooperative for costs associated therewith, in accordance with Cooperative policy and practice; provided, however, whenever practicable,

Cooperative shall contact Owner/Operator in advance of performing such work, and Cooperative agrees to meet with Owner/Operator to discuss the proposed modifications or improvements, and to discuss reasonable alternatives thereto.

- 5.5. For the mutual protection of Owner/Operator and Cooperative, any connection between Cooperative's service wires and Owner/Operator's Generator or Interconnection Facilities are only to be made with Cooperative's prior written authorization and subject to its right to have Cooperative personnel perform or present during such connection. Such approval is conditioned upon the approval of the Generator and Interconnection Facilities by the supplier(s) of electric power to Cooperative (such as, for example and without limitation, North Carolina Electric Membership Corporation and ACES Power Marketing, LLC), if requested by said supplier(s), and in the event such supplier(s) fail(s) to approve or withdraws approval of the Generator or Interconnection Facilities at any time, Owner/Operator understands and agrees that such failure or withdrawal by the power supplier(s) shall operate to require the Owner\Operator to refrain from connecting or disconnect the Generator or Interconnection Facilities. In such event, Cooperative shall use best efforts to facilitate dialogue between Owner/Operator and the relevant supplier to rectify the situation.

6. DESIGN:

- 6.1. Owner/Operator shall not deviate from the Generator or Interconnection Facility design contained in the approved Application for Interconnection ("Application") without first submitting a new Application for Interconnection and obtaining Cooperative's approval for the new or altered design. Owner/Operator shall not make any changes to the Generator output capacity and/or modification to the protection system required to meet the requirements of the Agreement (such as the various engineering standards cited herein) without notice to and written acceptance from Cooperative before making the changes to the Generator.
- 6.2. The nameplate output of the Generator is _____kW in the form of _____ phase, _____ wires, alternating current of 60 hertz frequency and at _____ volts.
- 6.3. Owner/Operator covenants and agrees to cause the design, installation, maintenance and operation of its Generator and Interconnection Facilities so as to reasonably minimize the likelihood of a malfunction or other disturbance damaging or otherwise affecting or impairing the System.

7. **PERMITS AND APPROVALS:** Owner/Operator shall obtain all environmental and other permits required by governmental authorities prior to construction, installation, and interconnection of the Generator. Owner/Operator shall also maintain these applicable permits and compliance with these permits during the term of this Agreement.

8. **TRANSFER TRIP EQUIPMENT; PROTECTIVE DEVICES:** The Generator must be connected to protective devices which will detect power outages and disconnect itself from the System automatically during an outage so as not to cause islanding. Such protective devices must be such that they communicate with and otherwise coordinate with Cooperative's protective devices, and Owner/Operator shall notify Cooperative of any proposed changes in settings. The Generator's protective equipment shall allow for Cooperative personnel to install grounds on the line during emergencies and power outages, if deemed necessary by Cooperative. To facilitate the installation of proper protected devices and transfer trip equipment, Owner/Operator shall, at its own cost and expense:

- 8.1. Jointly act with Cooperative to install, or cause to be installed, and maintain transfer trip

equipment acceptable to Cooperative between Cooperative's recloser(s) and Owner/Operator's inter-tie breaker or recloser in the event anti-islanding cannot be assured through other methods.

8.2. Modify or improve Cooperative's voltage regulating and overcurrent protective equipment as may be required to improve operation of the Generator, the Interconnection Facilities, and the System, including without limitation, the following:

8.2.1. any modification(s) to Cooperative's recloser(s) deemed appropriate or necessary by Cooperative, including without limitation, synchronism check relays and associated equipment; and

8.2.2. any modification(s) to voltage regulators deemed appropriate and/or necessary by Cooperative.

9. INTERCONNECTION:

9.1. Owner/Operator will, at its own cost and expense, install, operate, maintain, repair, inspect and otherwise shall be fully responsible for, the Generator and Interconnection Facilities. Owner/Operator shall conduct operations of the Generator and Interconnection Facilities in compliance with all aspects of the Rules and in accordance with governmental and industry standards for prudent engineering practices, including, but not limited to, standards referenced in Appendix A.

9.2. Owner/Operator shall comply with all applicable Cooperative service rules, regulations, Bylaws, rates, and tariffs (the "Rules"), which are incorporated herein by reference, as well as all applicable laws, regulations, zoning codes, building codes, safety rules and environmental restrictions applicable to the design, installation, operation or maintenance of its Generator and Interconnection Facilities.

9.3. The "Point of Interconnection" between Owner/Operator and Cooperative hereunder will be the point where the electric energy first leaves the System and enters the wires or facilities provided by Owner/Operator. The Parties agree to interconnect the Interconnection Facilities at the Point of Interconnection in accordance with the Rules.

9.4. Owner/Operator shall install a manual load-break disconnect switch with a clear visible indication of switch position System and Owner/Operator's Generator. The Isolation Device shall be installed as specified in the applicable engineering standards.

9.5. The Cooperative will notify Owner/Operator if there is evidence the Generator's or Interconnection Facilities' operation will cause or causes disruption or deterioration of service to other customers served from the System or if the Generator's or Interconnection Facilities' operation causes damage to the System. Even if Owner/Operator's operation and maintenance of the Generator is in accordance with the standard outlined above, Owner/Operator shall reasonably cooperate with Cooperative to resolve issues covered in such notification of disruption, deterioration or damage.

9.6. Owner/Operator will install a permanent warning label in a conspicuous place in close proximity to the electric meter or on the meter base to notify Cooperative personnel that there is a generator installed on the load side of the meter. The warning label shall not be placed in a location that would interfere with the ability of Cooperative personnel to read the electric meter. Owner/Operator shall also place a warning label on the Isolation Device. Cooperative will provide the warning labels to Owner/Operator. The warning labels must be in place before the Generator can be interconnected with System.

- 9.7. Owner/Operator shall not interconnect Owner/Operator's Generator with the System nor commence parallel operation of Owner/Operator's Generator until both Parties have accepted this Agreement and the requirements for interconnection stated in this Agreement have been met. Cooperative shall have the right and opportunity to have representatives present at the initial testing of Owner/Operator's protective apparatus. Owner/Operator shall notify Cooperative five (5) business days prior to the initial testing. In the event Owner/Operator has interconnected Owner/Operator's Generator without Cooperative's acceptance of this Agreement or the Generator has not met the requirements of this Agreement, Cooperative shall have the right to immediately isolate Owner/Operator's premises and/or Generator from Cooperative's System until Cooperative's assent to interconnection is granted and the requirements of the Agreement have been met.
- 9.8. Owner/Operator shall be responsible for installing and maintaining devices adequate to protect against damages caused by irregularities or outages on Cooperative's system, regardless of the cause or fault, including devices to protect against voltage fluctuations and single phasing.
- 9.9. Cooperative and 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. Cooperative does not assume any duty of inspecting Owner/Operator's lines, wires, switches, or other equipment or property and 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.
10. **COSTS:** The cost to Owner/Operator for all Cooperative owned and maintained facilities constructed and/or installed by Cooperative to accommodate the interconnection and safe operation of Owner/Operator's Generator in parallel with Cooperative's System shall be determined in accordance with Cooperative's rules of general applicability. To the extent not specifically addressed in Cooperative's Service Rules and Regulations, all charges or costs necessary for required upgrades on or modifications to the System identified in the Studies or otherwise reasonably necessary, in the sole discretion of Cooperative, to accept the Generator's production shall at all times remain the financial responsibility of Owner/Operator and may be charged separately if and as incurred. All meters, service connections and other equipment furnished by Cooperative, regardless of whether the equipment was purchased pursuant to a contribution in aid of construction, shall remain the property of Cooperative.
11. **OPERATION:**
- 11.1. Owner/Operator will operate the Facilities to ramp load at the Point of Interconnection so as to allow Cooperative's voltage regulators to maintain stable voltages to all members on the System.
- 11.2. Owner/Operator will control real and reactive power flow at the Point on Interconnection in such a manner as to avoid unacceptable voltage swings in excess of plus or minus three percent ($\pm 3\%$) or in excess of the criteria described in the applicable IEEE Standard on Cooperative's System.
- 11.3. Owner/Operator will operate its generating Facilities isolated from the System when Cooperative is operating the System in non-reclosing mode. Cooperative shall provide as much advance notice as is reasonably practicable of such operation.
- 11.4. Owner/Operator will notify Cooperative of any emergency or hazardous condition or

occurrence with the Generator or Interconnection Facilities that could or does interfere with safe operation of the System.

- 12. METERING:** Cooperative, or if applicable, its wholesale power provider, shall purchase, own, install and maintain such metering equipment as may be necessary to meter the electrical output of the Generator. All costs associated therewith shall be borne by 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.
- 13. TELEMETRY:** Telemetry may be required by Cooperative or other entities to monitor real-time output and other functions for generators that are operated remotely. In such instances, telemetry data shall be available to Cooperative and the communication of such data shall be compatible with Cooperative's communication methods.
- 14. TESTING RECORDS:** Owner/Operator shall provide to Cooperative all records of testing. Such records shall include testing performed prior to and at the start of commercial operation and periodic testing thereafter. Factory testing records of pre-packaged Interconnection Facilities and the protective systems of small units shall be acceptable. In the case of a factory test, Owner/Operator shall provide a written description and certification by the factory of the test, the test results and the qualification(s) of any independent testing laboratory. In addition, the settings of the equipment being installed are to be approved by the Cooperative prior to operation.
- 15. COOPERATIVE RIGHT OF ACCESS:**
 - 15.1.** Access To Premises: Authorized Cooperative agents shall have the right of ingress and egress to the premises of Owner/Operator at all times, over the same general route as Owner/Operator utilizes, for the purpose of reading meters, inspecting Cooperative's wiring and apparatus, changing, exchanging or repairing Cooperative property located on the premises of Owner/Operator, to remove such property at the time of or at any time after the suspension of interconnection of the Generator or termination of this Agreement, or for any other reasonable purpose in connection with the interconnection described in this Agreement, the Rules, or if necessary to provide or ensure quality service to its members.
 - 15.2.** Cooperative shall have access to Owner/Operator's Isolation Device at all times.
 - 15.3.** Although Cooperative reserves the right to inspect Owner/Operator's facilities at any time, nothing in this Agreement shall imply Cooperative is assuming the responsibility for doing so.
 - 15.4.** Cooperative's obligation to provide the interconnection contemplated by this Agreement is contingent on Cooperative's receipt of rights-of-way and necessary equipment in sufficient time for appropriate installation and testing. Accordingly, it is understood between the parties that any interconnection date set by either or both parties is subject to change.
- 16. MAINTENANCE OF INTERCONNECTION FACILITIES:** Owner/Operator shall cause the Maintenance of the Generator and Interconnection Facilities to be performed in accordance with the applicable manufacturers' recommended maintenance schedule or more often if necessary or desired by Owner/Operator. Owner/Operator agrees to cause its Generator 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, and applicable Institute of Electrical and Electronics Engineers (IEEE) Standards in effect at the time of construction, and as they may be amended from time to time.

- 17. ISOLATION:** Whenever feasible, Cooperative shall give Owner/Operator reasonable notice of the possible isolation of Owner/Operator's premises and/or Generator from Cooperative's System. Cooperative shall have the right to isolate Owner/Operator's premises and/or Generator from the System. In such event, Owner/Operator agrees Cooperative shall have no liability for any loss of sales or other damages, including all punitive and consequential damages for the loss of business opportunity, profits, or other losses, regardless of whether such damages were foreseeable, resulting from the isolation of Owner/Operator's premises, Generator and/or Interconnection Facilities from Cooperative's System per this Agreement. In the event of disconnection for any other reason than abandonment, and provided the reason for disconnection has been remedied or abated, Cooperative shall expend reasonable effort to reconnect Owner/Operator's premises and/or Generator with Cooperative's System in a timely manner.
- 17.1.** Owner/Operator may disconnect the Generator or Interconnection Facilities, provided that it notifies Cooperative of its intent to disconnect by written notice delivered not less than thirty (30) days prior to such disconnection. In the event Owner/Operator fails to provide the required notice and the disconnection adversely affects the System, Owner/Operator agrees to pay the costs of System repair plus any costs associated with repair or replacement occasioned by damage to member property arising as a result of the premature disconnection.
- 17.2.** Cooperative may isolate Owner/Operator's premises, the Generator or the Interconnection Facilities from Cooperative's system when, in the sole discretion of Cooperative and without limitation:
- 17.2.1.** any part of the Generator or Interconnection Facilities is not operating and/or maintained properly and such improper operation can adversely impact or actually adversely impacts Cooperative's ability to provide quality service to its member(s),
- 17.2.2.** Cooperative determines that either the Generator or Interconnection Facilities may endanger Cooperative's personnel or other persons or property,
- 17.2.3.** It is determined the continued operation of Owner/Operator's Generator or the Interconnection Facilities may endanger the integrity or safety of Cooperative's System
- 17.2.4.** Isolation is necessary in order to construct, install, repair, replace, remove, investigate or inspect any of Cooperative's equipment or part of Cooperative's system;
- 17.2.5.** Cooperative determines isolation of Owner/Operator's Generator or interconnection Facilities from Cooperative's system is necessary because of an emergency, forced outage, Force Majeure; or
- 17.2.6.** the Generator or Interconnection Facilities do not comply with prudent electrical practices.
- 18. INDEMNITY AND LIABILITY:**
- 18.1.** *Limitation of Liability:* With respect to Cooperative's provision of electric service to Owner/Operator and the services provided by Cooperative pursuant to this Agreement, the Cooperative's liability to Owner/Operator shall be limited as set forth in Cooperative's tariffs and terms and conditions for electric service, which are incorporated herein by reference.
- 18.2.** *Indemnification:* Notwithstanding any other provision of this Agreement or the Rules, Owner/Operator shall assume all liability for and shall indemnify 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

Owner/Operator's negligence, breach of this Agreement, 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 -

18.2.1. monetary losses;

18.2.2. The costs and expenses of defending an action or claim;

18.2.3. damages related to death or injury;

18.2.4. damages to property;

18.2.5. all other obligations by or to third parties, arising out of or resulting from Owner/Operator's action or inaction; and

18.2.6. damages for the disruption of business.

18.3. Sections 18.1 and 18.2 of this Agreement shall not be construed to relieve any insurer of its obligations to pay any claims in accordance with the provision of any valid insurance policy.

18.4. If Owner/Operator at any time fails to procure insurance covering required by this Agreement, Owner/Operator shall, at its own cost, defend, save harmless and indemnify Cooperative, its directors, officers, employees, agents, assignees, and successors in interest from and against any and all loss, liability, damage, claim, cost, charge, demand, or expense of any kind or nature (including attorneys fees and other costs of litigation) resulting from the death or injury to any person or damage to any property, including the personnel and property of Cooperative, its contractors, its customers, and/or the public to the extent that Cooperative would have been protected had Owner/Operator complied with all such insurance provisions. The inclusion of this Section 18.4 is not intended to create any express or implied right in Owner/Operator to elect not to provide any such required insurance.

19. INSURANCE:

19.1. Owner/Operator shall obtain and retain, for as long as its Generator is interconnected with the Cooperative's system, liability insurance which protects Owner/Operator from claims for bodily injury and/or property damage. For a non-residential Owner/Operator the minimum coverage shall be comprehensive general liability insurance with coverage at least \$2,000,000 per occurrence and for a residential Owner/Operator the minimum coverage shall be at a standard homeowner's insurance policy with liability coverage in the amount of at least \$300,000 per occurrence.

19.2. Prior to interconnection of the Generator with Cooperative's system, Owner/Operator shall furnish a properly executed certificate of insurance to Cooperative clearly evidencing the required coverage and any exclusions applicable to such coverage. Cooperative shall be named as an "additional insured" entity on Owner/Operator's policy. Thereafter, Owner/Operator shall submit the certificate of insurance annually to Cooperative (as soon as possible after receipt and on the anniversary thereof in subsequent years) or sooner if there is a change in coverage. The certificate shall provide that the insurance coverage shall not be canceled or modified unless and until Cooperative receives at least thirty (30) days prior written notice. Owner/Operator shall further replace such certificates for policies expiring during the period its Generator is interconnected with Cooperative's System. Cooperative has the right to refuse to establish or continue the interconnection of Owner/Operator's generation facility to Cooperative's System if such insurance is not in effect.

19.3. Insurance on the premises where Owner/Operator's Generator is located shall, by

endorsement to the policy or policies, provide for thirty (30) days of written notice to Cooperative prior to cancellation, termination, alteration or material change of such insurance.

20. FORCE MAJEURE: 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. A Force Majeure event does not include an act of negligence or intentional wrongdoing.

20.1. For the purposes of this Agreement, a Force Majeure event is any event:

20.1.1. that is beyond the reasonable control of the affected party; and

20.1.2. 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, terrorism, riot, 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.

21. NON-WARRANTY: Cooperative's approvals given pursuant to this Agreement or actions taken hereunder shall not be construed as any warranty or representation to Owner/Operator or any third party regarding the safety, durability, reliability, performance or fitness of Owner/Operator's generation and service facilities, its control or protective devices or the design, construction, installation or operation thereof.

22. EFFECTIVE TERM AND TERMINATION RIGHTS: This Agreement becomes effective when executed by both Parties and shall continue in effect until terminated. The Agreement may be terminated in accordance with the following:

22.1. If Owner/Operator desires to terminate the Agreement, Cooperative will agree to such termination if Cooperative is satisfied that Owner/Operator no longer can or will operate Owner/Operator's Generator at the premises and all bills for services previously rendered to Owner/Operator, plus any applicable termination charges, have been paid. Cooperative may waive part or all of any termination charges if Cooperative has secured or expects to secure from a new occupant or operator of the premises an Agreement satisfactory to Cooperative for the interconnection to Cooperative for a term not less than the unexpired portion of Owner/Operator's Agreement.

22.2. Cooperative, in addition to all other legal remedies, may either terminate the Agreement or suspend interconnection with Owner/Operator:

22.2.1. for any default or breach of Agreement by Owner/Operator,

22.2.2. for failure to pay any applicable bills when due and payable,

22.2.3. for a condition on Owner/Operator's side of the point of interconnection actually known by Cooperative to be, or which Cooperative reasonably anticipates may be, dangerous to life or property,

22.2.4. if Owner/Operator either fails to energize the Generator within 12 months of the Effective Date of this Agreement or permanently abandons the Generator (failure to operate the Generator for any consecutive 12 month period after the date of

interconnection shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties), or

22.2.5. by giving Owner/Operator at least sixty days notice in the event that there is a material change in an applicable rule or statute concerning interconnection and parallel operation of the Generator, unless Owner/Operator's installation is exempted from the change or Owner/Operator complies with the change in a timely manner.

No such termination or suspension, however, will be made by Cooperative without written notice delivered to Owner/Operator, personally or by mail, stating what in particular in the Agreement has been violated, except that no notice need to be given in instances set forth in Section 22.2.3.

23. OTHER DOCUMENTS: This Agreement is not intended to and shall not supersede requirements specified in Cooperative's Application for Membership, Member Agreement (as that term is defined in the Bylaws), Bylaws, Service Rules and Regulations, Rate Schedules, laws, regulations or other obligations or agreements between Cooperative and Owner/Operator; provided, however, to the extent they apply, all of the documents mentioned hereinabove, together with this Agreement, shall all be construed as one document.

24. GENERAL PROVISIONS:

24.1. 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:

If to Cooperative:

Vice-President of Engineering
518 NC Hwy 561 West
Ahoskie, NC 27910

copy to

Everette Winslow
Winslow Wetsch, PLLC
416 Morson Street
Raleigh, NC 27601

If to Owner/Operator

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

24.2. FURTHER ASSURANCES: Each party covenants to take all such actions and to execute all such documents as may be desirable to implement the provisions of this Agreement fully and effectively.

- 24.3. INTERPRETATION:** This Agreement and any other applicable documents are subject to changes or substitutions, either in whole or in part, as may be necessary to conform to applicable law. Unless specified otherwise, any changes or substitutions shall become effective immediately and shall nullify all prior provisions in conflict therewith. This Agreement has been fully reviewed and negotiated by the Parties. Accordingly, in interpreting this Agreement, no weight shall be placed upon which party drafted or controlled the drafting of the provisions being interpreted.
- 24.4. HEADINGS:** The descriptive headings of the various 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.
- 24.5. ENTIRE AGREEMENT:** This Agreement and the documents attached hereto constitute the entire Agreement between the Parties relating to the subject matter hereof, there being no other agreements or understandings, written or oral, other than those contained in this Agreement and the attachments hereto. This Agreement does not modify, change or impact any other agreement between the Parties relating to the supply of electric service, or the sale of, or purchase of, electric power.
- 24.6. AMENDMENTS:** The Parties may amend this Agreement but such amendment may only be effective and enforceable if it is set forth in a written instrument signed by both Parties.
- 24.7. ASSIGNMENT:** This Agreement shall be binding upon the heirs, successors and assigns of Owner/Operator and shall not be assigned without the written consent of the Cooperative, which shall not be unreasonably withheld. At any time during the term of this Agreement, Owner/Operator may assign this Agreement to a corporation, an entity with limited liability or an individual (the "Assignee") to whom Owner/Operator transfers ownership of the Generator; provided that Owner/Operator obtains the consent of the Cooperative in advance of the assignment. The Cooperative's consent will be based on a determination that the Assignee is financially and technically capable to assume ownership and/or operation of the Generator, 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 Generator, and must agree in writing to be subject to all provisions of this Agreement. The Cooperative may assign the Agreement to another entity without the approval of Owner/Operator, provided the assignment is subject to Assignee's obligation to continue to service Owner/Operator's load and to otherwise be responsible for the Cooperative's obligations under this Agreement.
- 24.8. THIRD PARTIES:** This Agreement is intended solely for the benefit of the parties hereto. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any person not a party of this Agreement.
- 24.9. GOVERNING LAW:** This Agreement shall be governed under laws of the State of North Carolina.
- 24.10. SEVERABILITY:** If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.
- 24.11. WAIVER:** No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed

expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

24.12. CUSTOMER CERTIFICATION: By signing this Agreement below, Owner/Operator hereby certifies that, to the best of Owner/Operator's knowledge, all of the information provided to the Cooperative in connection with electric service, interconnection and/or sale pursuant to this Agreement is true and correct, and that Owner/Operator has received and reviewed this Agreement.

24.13. COUNTERPARTS: This Agreement may be executed in any number of counterparts, each of which shall be regarded as an original and all of which shall constitute but one and the same instrument.

24.14. ACCEPTANCE AND SIGNATURES: Upon the acceptance hereof by Cooperative, evidenced by the signature of its authorized representative appearing below, this document shall be an Agreement for the interconnection of Owner/Operator's Generator to Cooperative's system.

24.15. RELATIONSHIP OF THE PARTIES: Nothing contained in the Agreement shall be construed to create an association, joint venture, partnership or any other type of business entity between the Cooperative and Owner/Operator, and neither Party shall take any action inconsistent with the obligation or commitments of the other hereunder.

**ROANOKE ELECTRIC
MEMBERSHIP CORPORATION**

"Cooperative"

"Owner/Operator"

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

Appendix A
List of Applicable Standards

1. IEEE 929 – Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, latest published edition)
2. IEEE 1547 – Standard for Interconnecting Distributed Resources with Electric Power Systems, latest published edition
3. IEEE 1547.1 –2005 Standard Conformance Test Procedures for Interconnection Distributed Energy Resources with Electric Power Systems
4. IEEE P1547.3 Draft: Guide for Monitoring, Information Exchange, and Control of Distributed Resources Interconnected with Electric Power Systems
5. UL 1741 – Inverters, Converters and Controllers for use in Independent Power Systems, latest published edition
6. NFPA 70 – National Electrical Code, latest published edition

ROANOKE ELECTRIC MEMBERSHIP CORPORATION
Ahoskie, North Carolina

RIDER RGR
Renewable Generation Rider

AVAILABILITY

Service under this Rider is available only to consumers located in the Cooperative's service territory who have qualifying facilities fueled by trash or methane derived from landfills, hog waste, or poultry waste, or other renewable (wind, photovoltaic, biomass-fueled, hydro) generating facilities contracting to sell generating capacity and energy greater than 25 kW but not in excess of 500 kW, which are interconnected directly with the Cooperative's system and which are qualifying facilities as defined by the Federal Energy Regulatory Commission pursuant to Section 210 of the Public Utility Regulatory Policies Act of 1978.

Service necessary for the delivery of the consumer's power into the Cooperative's system under this Rider shall be furnished solely to the individual contracting consumer in a single enterprise, located entirely on a single, contiguous premise. Service hereunder shall be restricted to the capacity of the consumer's generating facilities which may be operated in parallel with the Cooperative's system. Service necessary to supply the consumer's total load requirements other than Auxiliary Load, and service necessary to supply the consumer's Auxiliary Load when the consumer's generating facilities are not operating, shall be billed on the applicable Schedule(s) of the Cooperative. Power delivered to the Cooperative under this Rider shall not offset or be substituted for power contracted for or which may be contracted for under any other Schedule of the Cooperative. Prior to receiving service under this Rider the consumer must have a signed "Standard Interconnection Agreement" between the consumer and the Cooperative.

The obligations of the Cooperative in regard to service under this Rider are dependent upon its securing and retaining all necessary rights-of-way, privileges, franchises, and permits for such service. The Cooperative shall not be liable to any consumer or applicant for power in the event it is delayed in, or is prevented from purchasing power by its failure to secure and retain such rights-of-way, rights, privileges, franchises, and permits. Consumers receiving service under this Rate Rider must have their renewable generation registered with the North Carolina Utilities Commission prior to connecting to the Cooperative's system.

CHARACTER OF SERVICE

Service shall be provided at one point of delivery through a single meter at one of the following voltages. Standard service shall be single-phase, 120/240 Volts, and 60 Hz. Three-phase service may be provided where available. Where three-phase service is available, voltages may be:

208/120 Volts or 480/277 Volts, 4-Wire wye
Service at other voltages may be available, at the option of the Cooperative.

MONTHLY RATE

The following charges and credits will be added to the consumer's monthly bill based upon the nameplate rating of the renewable generating facility:

Supplemental Monthly Basic Facilities Charges:		
Over 25 kW to 100 kW	\$ 7.50 per month	
Over 100 kW to 500 kW	\$ 15.00 per month	Interconnection
Facilities Charge ¹ :	\$ 5.00 per month	

¹ The Interconnection Facilities Charge may be increased according to the provisions of the paragraph entitled "Interconnection Facilities Charge" below.

Energy Credits:	<u>Variable Rate</u>	<u>5 Years Fixed</u>
All Energy per Month:	5.85 ¢ per kWh	6.72 ¢ per kWh

RENEWABLE ENERGY CERTIFICATES

Payments and/or credits for the Renewable Energy Certificates (RECs) and any environmental attributes produced as a result of the energy generated by the renewable generation shall be negotiated between the consumer and the Cooperative on a case-by-case basis, with the Cooperative having the first right of refusal. The negotiated price shall be based upon the type of generation and the market for similar certificates at the time the generation

comes online. Consumers receiving compensation for the RECs from the Cooperative shall not be eligible to participate in NC GreenPower's renewable generation program.

INTERCONNECTION FACILITIES CHARGE

The consumer shall be responsible for providing suitable control and protective devices on their equipment to assure no disturbance to other consumers of the Cooperative or to the Cooperative itself, and to protect the consumer's facilities from all loss or damage which could result from operation with the Cooperative's system. All interconnection equipment, including control and protective devices, must meet or exceed the National Electric Code (NEC), National Electric Safety Code (NESC), and Institute of Electrical and Electronics Engineers (IEEE) Standards.

The Cooperative will furnish, install, own, and maintain and the consumer shall make an upfront contribution-in-aid of construction equal to the installed cost of all distribution, service, and interconnection related facilities necessary for service under this Rider. Interconnection facilities include suitable control and protective devices installed on Cooperative equipment to allow operation of the consumer's generating facilities; metering facilities equipped to prevent reverse registration for the measurement of service under this Rider; and any other modifications to its system required to serve the consumer under this Rider as determined by the Cooperative. All such distribution, service, and interconnection related facilities shall be subject to a monthly Interconnection Facilities Charge equal to 1.0% times installed cost of the required interconnection related facilities.

The Cooperative reserves the right to install facilities necessary for the appropriate measurement of service under this Rider and to adjust the Interconnection Facilities Charge accordingly, solely at the option of the Cooperative.

POWER FACTOR CORRECTION

When the average monthly power factor of the power supplied by the consumer to the Cooperative is less than 97 percent or greater than 100 percent, the Cooperative may correct the energy, in kilowatt-hours, as appropriate. The Cooperative reserves the right to install facilities necessary for the measurement of power factor and to adjust the Interconnection Facilities Charge accordingly, solely at the option of the Cooperative.

RATE UPDATES

The Energy Credits and Supplemental Monthly Basic Facilities Charge of this Rider may be updated on an annual basis. Any changes in the Energy Credits will be based upon changes in the avoided cost of the Cooperative's wholesale power supplier. Members who have contracted for the Fixed Long Term Credits will not be affected by updates in the Energy Credits until their rate term expires. For all Qualifying Facilities selling to the Cooperative pursuant to the Variable Credit provisions of this Rider, such credits shall be updated and changed in accordance changes in the avoided cost of the Cooperative's wholesale power supplier.

DEFINITIONS

Nameplate Capacity: The term "Nameplate Capacity" shall mean the maximum continuous electrical output capability of the generation at any time at a power factor of ninety-seven percent (97%).

Capacity: The term "Capacity" shall mean the Nameplate Capacity of the consumer's generating facilities, less the portion of that capacity needed to serve the generating facilities' Auxiliary Load.

Auxiliary Load: The term "Auxiliary Load" shall mean power used to operate auxiliary equipment in the facility necessary for power generation (such as pumps, blowers, fuel preparation machinery, and exciters).

Month: The term "Month" as used in this Rider means the period intervening between meter readings for the purposes of monthly billing, such readings being taken once per month.

PAYMENTS

Credit billings to the consumer shall be payable to the consumer within twenty-five (25) days of the date of the scheduled meter reading.

CONTRACT PERIOD

Each consumer shall enter into a contract which will specify the capacity of the Qualifying Facility and shall specify the initial term and the associated rate at the time the contract is executed. The initial term for consumers receiving credits under the variable rate and the five year fixed long term rate shall be a minimum of five (5) years.

The Cooperative reserves the right to terminate the consumer's contract under this Rider at any time upon written notice to the consumer in the event that the consumer violates any of the terms or conditions of this Rider or operates its generating facilities in a manner which is detrimental to the Cooperative or any of its consumers or fails to deliver energy to the Cooperative for six (6) consecutive Months. In the event of early termination of a contract under this Rider, the consumer will be required to pay the Cooperative for costs due to such early termination.

SALES TAX

Any applicable State and local sales taxes will be added to all services billed under this Rider.

ROANOKE ELECTRIC MEMBERSHIP CORPORATION

Ahoskie, North Carolina

RIDER SRG

Rider for Small Renewable Generation Systems

AVAILABILITY

Service under this Rider is available only to consumers located in the Cooperative's service territory who own a small renewable generator (wind, photovoltaic, biomass-fueled, hydro) that is interconnected directly with and operated in parallel with the Cooperative's distribution system with a capacity of 25 kW or less and contract with the Cooperative to sell all generating capacity and energy to the Cooperative.

Service necessary for the delivery of the consumer's power into the Cooperative's system under this Rider shall be furnished solely to the individual contracting consumer in a single enterprise, located entirely on a single, contiguous premise, and owned by the consumer installing the small renewable generator. Service hereunder shall be restricted to the capacity of the consumer's generating facilities. Power delivered to the Cooperative under this Rider shall not offset or be substituted for power contracted for under any other schedule of the Cooperative.

The obligations of the Cooperative in regards to service under this Rider are dependent upon its securing and retaining all necessary rights-of-way, privileges, franchises, and permits for such service. The Cooperative shall not be liable to any consumer or applicant for power in the event it is delayed in, or is prevented from purchasing power by its failure to secure and retain such rights-of-way, rights, privileges, franchises, and permits.

TYPE OF SERVICE

Service under this schedule shall be single-phase, 60 cycles, at one of the Cooperative's available secondary voltages.

RATE

The following charges and credits will be added to the consumer's monthly bill:

Supplemental Monthly Basic Facilities Charge:	\$3.75
Credit for energy delivered to Cooperative:	5.85 ¢per kWh

The monthly minimum bill for consumers receiving this service shall be no less than the Basic Facilities Charge in the rate schedule with which this rate is used, plus the supplemental Basic Facilities Charge as stated in this schedule, less any credits for energy delivered to the Cooperative's system.

METERING REQUIREMENTS

The Cooperative will furnish, install, own, and maintain metering to measure energy (kilowatt hours) delivered by the Cooperative to the consumer. The Cooperative will also furnish, install, own, and maintain additional metering equipment to measure the kilowatt hours delivered from the consumer to the Cooperative. The consumer's service will be metered with two meters equipped to prevent reverse registration, one that will measure any energy delivered by the Cooperative to the consumer, and the other which will measure any energy produced by the consumer's renewable energy generation system and delivered to the Cooperative. The consumer will bear the cost of providing the necessary meter sockets to enable the Cooperative to make the interconnections. If the home's electric meter does not provide a means to disconnect power, the homeowner must provide a separate disconnect switch accessible to utility personnel. The Cooperative shall reserve the right to install special metering and load research devices on the consumer's equipment and the right to use the consumer's telephone line for communications with the Cooperative's and the consumer's equipment.

INTERCONNECTION REQUIREMENTS

The consumer must submit an application to interconnect the small generation system, which must be approved by the Cooperative. Upon approval of the application, and prior to interconnection to the Cooperative's electrical system the consumer must sign an interconnection agreement certifying:

1. All renewable energy systems equipped with a voltage inverter, shall be manufactured, installed, and operated in compliance with Underwriters Laboratory (UL) standard 1741 for distributed generation and has been identified and listed as "utility-interactive".

(Note: Induction type generators shall be approved on a case by case basis.)

2. That the system/installation complies with the National Electric Code (NEC) and all applicable codes and that the system has been inspected and approved by the electrical inspector having legal jurisdiction.
3. The system shall be installed, operated, and maintained in accordance with the manufacturer's, government, and industry standards and specifications.
4. The system shall be installed, operated, and maintained in accordance with the Cooperative's Bylaws and Service Rules and Regulations and the Small Generation Interconnection agreement at all times.

CONTRACT TERM

The contract period for service under this Rider shall be one (1) year and thereafter shall be automatically renewed for successive one-year periods, subject to the rules availability and terms of the Small Generation Interconnection Agreement. Service may be terminated by the consumer-owner or the Cooperative in accordance with the terms as stated in the interconnection agreement. The Cooperative reserves the right to inspect the consumer's small generation system at any reasonable time and to immediately disconnect the consumer's system without providing prior notice should it be necessary to address a hazardous condition or for failure to comply with any of the specifications and requirements as stated in the Small Generation Interconnection Agreement.

ROANOKE ELECTRIC MEMBERSHIP CORPORATION
Ahoskie, North Carolina

RIDER NB
Net Metering Rider for Small Renewable Generation Systems

AVAILABILITY

This Rider is available in conjunction with any of the Cooperative's Residential Service and Commercial Service schedules where a consumer-owned small renewable generator (wind, photovoltaic, biomass-fueled, hydro) is designed to offset portion or all of the consumer's electrical requirements normally supplied by the Cooperative, has been installed on the consumer-side of the meter, is interconnected with and operated in parallel with the Cooperative's electric distribution system, and the consumer's intent is to purchase all power requirements from the Cooperative net of any power generated by the consumer's renewable energy system in any given month. Service on this Rider shall only be available consumers who own the property where electrical service is received from and delivered to the Cooperative. The nameplate rating of the small renewable generator must be the lesser of: (1) the consumer's estimated maximum 15-minute integrated demand, (2) the consumer's Contract Demand, or (3) 25 kW. Small renewable generators' connected in parallel with the Cooperative's facilities must have safety, system protection, and power quality equipment installed and operated in accordance with rules of the Cooperative. Consumers receiving service under this Rider agree to assign the Renewable Energy Certificates (RECs) and all environmental attributes associated with the small renewable generator to the Cooperative

Service under this Rider shall be available in all territory served by the Cooperative only under written contract and shall be subject to the Cooperative's established Service Rules and Regulations as filed with the North Carolina Utilities Commission. The provisions of the Schedule with which this Rider is used are modified only as shown herein.

TYPE OF SERVICE

Service under this schedule shall be single-phase at the voltage of 120/240 or three-phase at a voltage of either 120/208 or 240/480, 60 cycles. The type of service supplied will depend upon the voltage available. Prospective consumers should ascertain the available voltage by inquiring at the nearest Cooperative office before purchasing equipment. Three-phase voltage, other than the foregoing, is subject to mutual agreement between the Cooperative and the consumer. Other types of installations may be permitted, subject to approval by the Cooperative.

RATE

The following charges and credits will be added to the consumer's monthly bill:

Supplemental Monthly Basic Facilities Charge:	\$3.75
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The monthly minimums bill for consumers receiving this service shall be no less than the Basic Facilities Charge in the residential or commercial rate schedule with which this rate is used, plus the supplemental Basic Facilities Charge as stated in this schedule.

METERING REQUIREMENTS

The Cooperative will furnish, install, own, and maintain metering to measure energy (kilowatt-hours) delivered by the Cooperative to the consumer and the energy delivered from the consumer to the Cooperative. When a consumer requests that the Cooperative supply electric service in a manner that requires equipment and facilities beyond those which the cooperative would normally provide, and the Cooperative finds it practical to do so, such excess equipment and facilities will be provided as additional facilities at a cost to the consumer. Costs will be collected through additional facilities charges and/or contributions in aid-to-construction as agreed upon by the Cooperative and the consumer-owner. Due to the complexity and cost of some metering installations, the consumer should contact the Cooperative regarding different metering options prior to the purchase of equipment.

INTERCONNECTION REQUIREMENTS:

The consumer must submit an application to interconnect the small generation system which must be approved by the Cooperative. Upon approval of the application, and prior to interconnection to the Cooperative's electrical system, the consumer must sign an interconnection agreement certifying:

1. All renewable energy systems equipped with a voltage inverter, shall be manufactured, installed, and operated in compliance with Underwriters Laboratory (UL) standard 1741 for distributed generation and has been identified and listed as "utility-interactive".

(Note: Induction type generators shall be approved on a case by case basis.)

2. That the system installation complies with the National Electric Code (NEC) and all applicable codes and that the system has been inspected and approved by the electrical inspector having legal jurisdiction.
3. The system shall be installed, operated, and maintained in accordance with the manufacturer's, government, and industry standards and specifications.
4. The system shall be installed, operated, and maintained in accordance with the Cooperative's Bylaws and Service Rules and Regulations and the Small Generation Interconnection Agreement at all times.

The contract period for service under this Rider shall be one (1) year and thereafter shall be automatically renewed or successive one-year periods, subject to the rates availability and terms of the Small Generation Interconnection Agreement. Service may be terminated by the consumer-owner or the Cooperative in accordance with the terms as stated in the interconnection agreement. The Cooperative reserves the right to inspect the consumer's small generation system at any reasonable time and to immediately disconnect the consumer's system without providing prior notice should it be necessary to address a hazardous condition or for failure to comply with any of the specifications and requirements as stated in the Small Generation Interconnection Agreement.