

CLAVERACK RURAL ELECTRIC COOPERATIVE, INC.

Policy Bulletin No. B-19

SUBJECT: Alternative Energy Production

POLICY:

This policy, along with *Appendix A, Safety & Interconnection Requirements for Alternative Energy Production*, and *Appendix B, Alternative Energy Systems Service Rate for Member Alternative Energy Production*, outlines the cooperative's policy on member interconnection of Alternative Energy Systems and Qualifying Facilities as herein defined.

RESPONSIBILITY: President & CEO or Delegate

PROCEDURE:

It is the policy of *Claverack Rural Electric Cooperative, Inc.* ("the Cooperative") to permit and encourage Alternative Energy System ("AES")/Qualifying Facility ("QF") Owners to operate cogeneration and small power production facilities and safely and reliably interconnect them with the Cooperative's electric distribution system. The term AES/QF shall be used throughout this document to define any form of generation that is not owned and operated by the Cooperative and is interconnected to the Cooperative. Alternative Energy Systems are defined under Pennsylvania's Alternative Energy Portfolio Standards Act of 2004, as amended ("Act 213-2004"). Qualifying Facilities are defined under the Public Utility Regulatory Policies Act of 1978 ("PURPA"). This policy will enable the AES/QF Owner to deliver total or excess energy into the Cooperative's distribution system. Compensation for such delivered energy shall be based on Allegheny Electric Cooperative, Inc.'s ("Allegheny") avoided costs. The interconnection of an AES/QF and the Cooperative's distribution system is subject to the following conditions:

- A. The purchase of electric energy or capacity from an AES/QF shall be subject to the applicable rules, policies, procedures, technical requirements, and rate schedules established by Allegheny, including but not limited to Allegheny Policy A1301 and Allegheny Rate Schedule SPP, as may be amended from time to time at Allegheny's sole discretion (collectively, "Allegheny's Purchase Rules"). In accordance with the Order of the Federal Energy Regulatory Commission issued May 20, 2022, at Docket No. QM22-9-000, Allegheny shall have no obligation to purchase electric energy or capacity from a generator that is either a small power production QF with a net capacity greater than 5 megawatts ("MW") or a cogeneration QF with a net capacity greater than 20 MW.
- B. Prior to the time of interconnection, the AES/QF Owner must submit to the Cooperative complete and detailed drawings including a site diagram and an electrical line diagram of the proposed installation. Such submittal shall be in sufficient detail to provide reasonable assurance that the AES/QF complies with all Cooperative and Allegheny requirements. The cooperative reserves the right to require the AES/QF Owner to submit electrical drawings signed by a licensed Pennsylvania Professional Engineer. Any new or proposed AES/QF should be

evaluated by the Cooperative to determine system impacts. The AES/QF Owner shall notify the Cooperative when the unit is ready to be energized. The Cooperative may require additional documentation evidencing a satisfactory level of completion including but not limited to the results of equipment testing and inspections. Written approval must be received from the Cooperative prior to the physical interconnection of the AES/QF to the Cooperative's electric system.

The AES/QF Owner shall be responsible for payment of any incremental costs incurred by the Cooperative or Allegheny to interconnect with, synchronize, or accept output from the AES/QF. This would include, but not be limited to:

1. The costs associated with an engineering or evaluation study to accommodate the AES/QF interconnection.
2. Increase in service size (transformer capacity, service conductor size, meter base).
3. Change or addition of type of service, e.g.
 - a. Single-phase to three-phase
 - b. Voltage change
 - c. Metering or disconnect devices.
4. Line extension or system upgrade for an AES/QF:
 - a. Single-phase line extension to the facility
 - b. Three-phase line extension to the facility
 - c. Reconductoring a circuit to increase current carrying capability
 - d. Replacement/upgrade/installation of circuit protective or regulating equipment including associated communications required to accommodate AES/QF.

All AES/QF wiring must be in compliance with the National Electrical Code (NEC) and all other applicable codes and ordinances and must be approved by an electrical inspection agency acceptable to the Cooperative.

Any reference in this Policy to a code, standard, regulation, or guideline shall be construed to mean the current version adopted by the proper authority of that document.

- C. The interconnection equipment must be of a "fail safe" design to ensure that in the event of any electric supply or equipment failure, the AES/QF's protective equipment will automatically separate the AES/QF from the cooperative's electric system in accordance with IEEE 1547 requirements.

The interconnection equipment must include an approved manual, visible load break safety switch lockable in the open position and must be accessible at all times to the Cooperative's personnel. The AES/QF Owner shall agree that the Cooperative may open the disconnect switch without prior notice for the following reasons:

1. Emergency conditions on the Cooperative's electric system.

2. Inspection of the AES/QF by the Cooperative reveals a hazardous condition or lack of proper maintenance of AES/QF facilities.
 3. The AES/QF interferes with electrical service to Cooperative members or with the Cooperative's electrical system. Interference may include, but not be limited to over or under voltage or frequency, harmonics, etc.
 4. Repair work on the Cooperative's system. Where time permits, the Cooperative will attempt to provide advance notice to the AES/QF Owner of imminent disconnection of the AES/QF and the reasons for same.
- D. The AES/QF electric system should be able to withstand all expected electric transients that occur on the Cooperative's electric distribution and transmission systems, including outages. The AES/QF Owner shall have the sole responsibility for the safety and electrical protection of his/her AES/QF, without regard to the condition of the Cooperative's facilities.
- E. The AES/QF must be operated so that no adverse effect(s) or power quality issue(s) occur to the Cooperative's electrical system or to others connected thereto. If such adverse effect(s) occur, the AES/QF Owner must discontinue the operation of the AES/QF and take corrective action(s) at the AES/QF Owner's sole expense, as deemed necessary by the Cooperative, and/or industry standards, including IEEE Standard 1547, IEEE 929, and UL 1741. Adverse effect(s) and power quality issues include, but are not limited to, voltage regulation, flicker, power factor, and/or harmonics.

Cooperative observation, review, inspection, or testing shall not be considered either as an endorsement or confirmation of any aspect, feature, element, or condition of the AES/QF or associated interconnection equipment or the operation thereof, nor as a warranty as to the fitness, safety, desirability, or reliability of same. The inspection does not impose any obligation upon the Cooperative or Allegheny to warrant or ensure in any manner the AES/QF's safety or compliance with this Agreement. Further, the Cooperative and Allegheny make no representations concerning, and expressly disclaim, any expertise or specialized knowledge relating to the particular type of generation employed by the generator, or the equipment associated with such generation.

- F. The AES/QF Owner must inform the Cooperative of any changes to the AES/QF and obtain the Cooperative's approval before changes are made to the AES/QF in order to address the adverse effect(s) referred to in Paragraph D above. Prior to reconnecting, the AES/QF Owner must inform the Cooperative of their intent to reconnect.
- G. The AES/QF Owner will own, install, and maintain at their expense, all safety and interconnection equipment as specified by the Cooperative. The minimum required interconnection facilities are described in Appendix A hereto. (The Cooperative reserves the right to observe and witness the installation and testing of interconnection facilities pursuant to industry practices, codes, and standards, including, but not limited to, IEEE 1547, IEEE 929, and UL 1741.)

- H. The Cooperative or Allegheny reserves the right to inspect the AES/QF and interconnection equipment at any time. Such inspections shall not relieve the AES/QF Owner from his/her obligation to operate and maintain the AES/QF in a safe and satisfactory manner.
- I. Residential members that are AES/QF Owners are encouraged to maintain a current liability insurance policy adequate in the amount to cover all forms of liability that may arise from the interconnection of the AES/QF interconnected to the Cooperative's electric system. Non-residential members who are AES/QF Owners must have a current liability insurance policy adequate in amount to cover all forms of liability that may arise from the operation of the AES/QF interconnected to the Cooperative's electric system. The policy should list the Cooperative and Allegheny as additional named insureds. A copy of this policy must be on file with the Cooperative. Lapse of the policy must be automatically reported to the Cooperative by the insurer and shall result in the immediate disconnection of the AES/QF from the Cooperative's electrical system. A minimum of one million dollars (\$1,000,000.00) in liability insurance is required, but a higher, more specific amount may be required based on the Cooperative's review of the specific AES/QF. The owner or operator of the AES/QF shall pay all costs of changes for safety purposes, repairs, or losses due to adverse effects on the equipment or facilities of other members or the Cooperative itself caused by the connection or operation of an AES/QF.
- J. The AES/QF Owner shall agree to hold the Cooperative and/or Allegheny harmless and indemnify the Cooperative and/or Allegheny in connection with any damages or injury affecting any party, resulting from the installation or the interconnection of the AES/QF to the Cooperative's or Allegheny's system, and the purchase of any output from the AES/QF, or operation of the AES/QF. The AES/QF Owner agrees to indemnify the Cooperative and/or Allegheny for any money damages, liabilities, administrative, and/or legal expenses incurred by the Cooperative and/or Allegheny as a result of the failure of the AES/QF Owner's equipment to meet any requirement or condition set forth herein.
- K. The AES/QF Owner shall sell its output to Allegheny, pursuant to PURPA or Act 213-2004 (as applicable) requirements, or upon written notification to Allegheny, to another entity. Allegheny will purchase output from AES/QF facilities that: (1) meet the requirements set forth in Allegheny's Purchase Rules; and (2) meet the interconnection requirements of the Cooperative, Allegheny, and any adjoining utilities and/or regional transmission organizations. Output from AES/QF facilities satisfying the above requirements will be purchased pursuant to the rates, terms, and conditions set forth in Allegheny's Purchase Rules and pursuant to a power purchase agreement with Allegheny. In the event of a conflict between this policy and Allegheny's Purchase Rules concerning the purchase and sale of output generated by any AES/QF facilities, then Allegheny's Purchase Rules shall govern.
- If another power purchasing entity is selected, a transmission or other charge may apply to wheel or transport the electrical power over the Cooperative's or Allegheny's electric facilities. The Cooperative will sell electric energy and capacity to the AES/QF at rates, and upon terms and conditions, as specified in the Cooperative's applicable rules, regulations, policies, and rate schedules.

- L. The AES/QF Owner is responsible for executing a contract with Allegheny to receive compensation for its output delivered into the Cooperative's electrical system. See Appendix B – AES Service Rate for member alternative energy production.

The Cooperative requires that any AES/QF interconnected to a residential account be designed to generate no more than 110% of the member's annual electric generation consumption as determined during the 12 months immediately preceding the year of interconnection and may not have a nameplate capacity greater than 25 kW unless otherwise approved by the Cooperative. If a 12-month history is not available, then the AES/QF Owner must submit a detailed load data sheet.

Administrative, application, and/or service fees may be charged to any account with an interconnected AES/QF to avoid inter-class or intra-class cost shifting as a result of the costs associated with administering an AES/QF. The application fee which is listed on Claverack's Schedule of Fees document as "Distributed Energy Resource Application Fee" must be paid in full before the review process begins.

- M. For AES/QF facilities of more than 150 kW, Allegheny will evaluate the proposed facility and negotiate potential purchases on a case-by-case basis, at rates, terms, and conditions set forth in Allegheny's Purchase Rules. Administrative fees and other related costs may also be charged to prevent intra-system cost shifting. If an AES/QF with more than 150 kW in capacity produces generation that results in a 10% or greater reduction in the member's purchase of electricity from the Cooperative compared to the year immediately preceding the interconnection, then the member may be responsible for its share of stranded costs obligation as determined by the Cooperative.
- N. Allegheny may refuse to purchase output from an AES/QF from time to time so the Cooperative can (1) construct, install, maintain, repair, replace, remove, investigate, or inspect any of the Cooperative's equipment or any part of the Cooperative's System; or (2) if the Cooperative and/or Allegheny determine(s) that curtailment, interruption, or reduction of deliveries of energy or energy and capacity is appropriate because of emergencies, forced outages, operating conditions on the Cooperative's system, or as otherwise required by industry-standard electrical practices.
- O. Synchronous Generators will operate at a power factor required by the Cooperative.
- P. The AES/QF must be installed to meet the National Electrical Safety Code (NESC) or other applicable code requirements for clearances from the nearest Cooperative electric facility, or such other distance as the Cooperative deems necessary for safety or electric operation-related reasons. AES/QF are not allowed to be installed on electrical easements or ROW unless otherwise approved by the Cooperative.
- Q. The AES/QF shall not create any reverse flow of power or injection of output whatsoever into any adjoining utility system. The AES/QF Owner must ensure that the AES/QF and all related equipment are designed, constructed, equipped, and operated with a breaker or other equipment and operation functions that will prevent and avoid any such reverse flow of power or injection of output.

- R. Depending on the size of the AES/QF, a study may be required by the Cooperative or by the adjoining utility to determine if the facility is permitted to interconnect. Additionally, an AES/QF may not be able to interconnect with the Cooperative due to electrical constraints of the delivery point (source), as solely determined by the Cooperative, or by Allegheny due to contractual constraints, or by an adjoining utility system. Larger projects may be best served by applying to PJM Interconnection LLC.

CLAVERACK RURAL ELECTRIC COOPERATIVE, INC.

Policy Bulletin No. B-19

Appendix A

**SAFETY & INTERCONNECTION REQUIREMENTS FOR
ALTERNATIVE ENERGY PRODUCTION**

The Cooperative recognizes the various electric industry standards and safety codes as they pertain to Alternative Energy Systems (AES) or Qualifying Facilities (QF). The standards and codes to be followed include but are not limited to: Institute of Electronic and Electrical Engineers (IEEE), Mid-Atlantic Distributed Resource Initiative (MADRI), PJM Interconnection, National Electrical Safety Code (NESC), National Electrical Code (NEC), National Fire Protection Association (NFPA), Underwriters Laboratories (UL), state, and local entities. Any reference in this Policy to a code, standard, regulation, or guideline shall be construed to mean the current version adopted by the proper authority of that document.

At a minimum, the Cooperative requires the use of AES/QF equipment that meets the intent of the IEEE 1547, and/ or IEEE 929, and/ or UL 1741, and any other current industry standards.

PROJECT REVIEW

To ensure that the AES/QF meets basic requirements and other Cooperative members' electric service is not negatively affected by one (or more) operating AES/QF units, the Cooperative will perform a technical review of the AES/QF unit. The review process is intended to reveal potential problems prior to the operation of the AES/QF, as well as provide a cost estimate for the necessary work to interconnect AES/QF generation. Any cost for studies associated with the proposed installation of an AES/QF shall be borne by the AES/QF Owner. The AES/QF owner shall also bear all costs associated with upgrades to the Cooperative's distribution system that are necessary to accommodate the AES/QF.

The Cooperative reserves the right to reevaluate the continued operation of the AES/QF if any actual or potential safety, quality, or reliability issues arise or occur. Any corrective actions recommended by the Cooperative or its agent must be implemented at the AES/QF Owner's expense. This may include termination of the operation of one or more AES/QF units interconnected on the same line section.

RESPONSIBILITY

While the Cooperative will perform a technical review of the proposed AES/QF to determine its potential impact on the Cooperative system and other members, it shall be the sole responsibility of the AES/QF Owner to design and operate a system that complies with all relevant regulations, safety standards, Cooperative policies, and system protection requirements. The AES/QF protection system shall be designed to assure the reliability of the protection scheme as necessitated by the design and location of the AES/QF. This protection must be compatible with the Cooperative's system protective devices. Paralleling member generation with the Cooperative system will be permitted only upon obtaining formal Cooperative approval in advance.

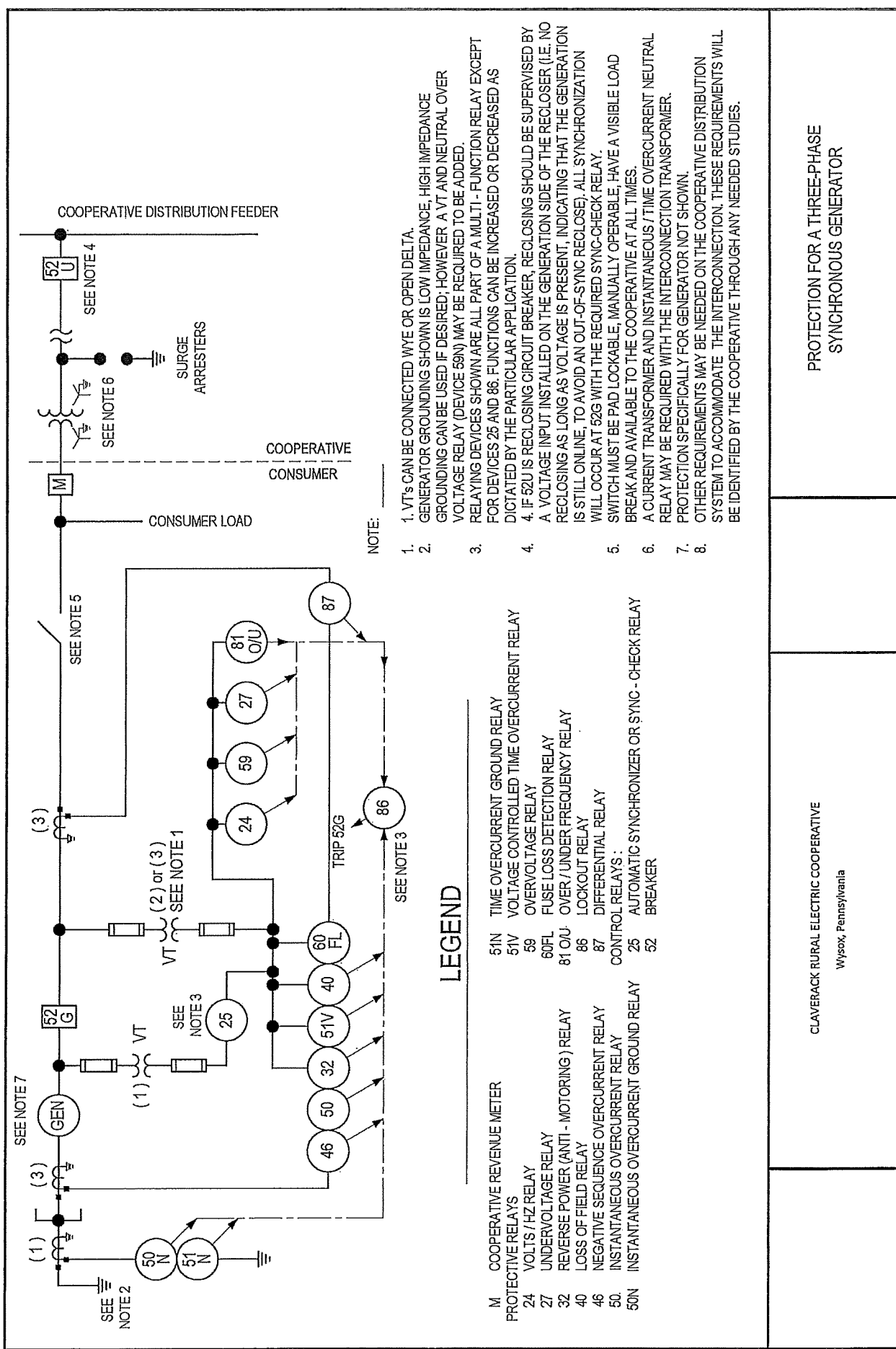
The AES/QF Owner is solely responsible for providing adequate protection for his/her equipment.

EXHIBIT 1

GENERAL PROTECTION REQUIREMENTS

Figure

- 1 Protection for a three-phase synchronous generator
- 2 Protection for a single-phase induction generator
- 3 Protection for a three-phase induction generator
- 4 Protection for a single-phase inverter
- 5 Protection for a three-phase inverter



NOTE:

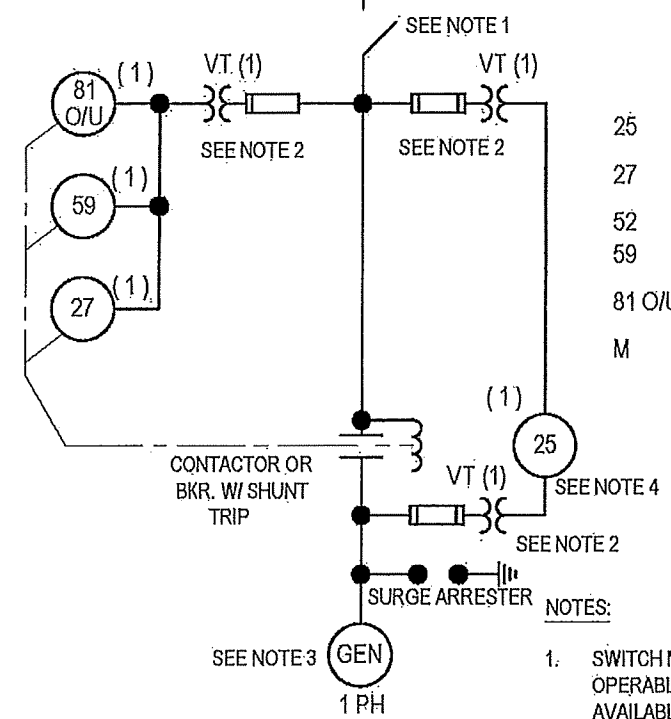
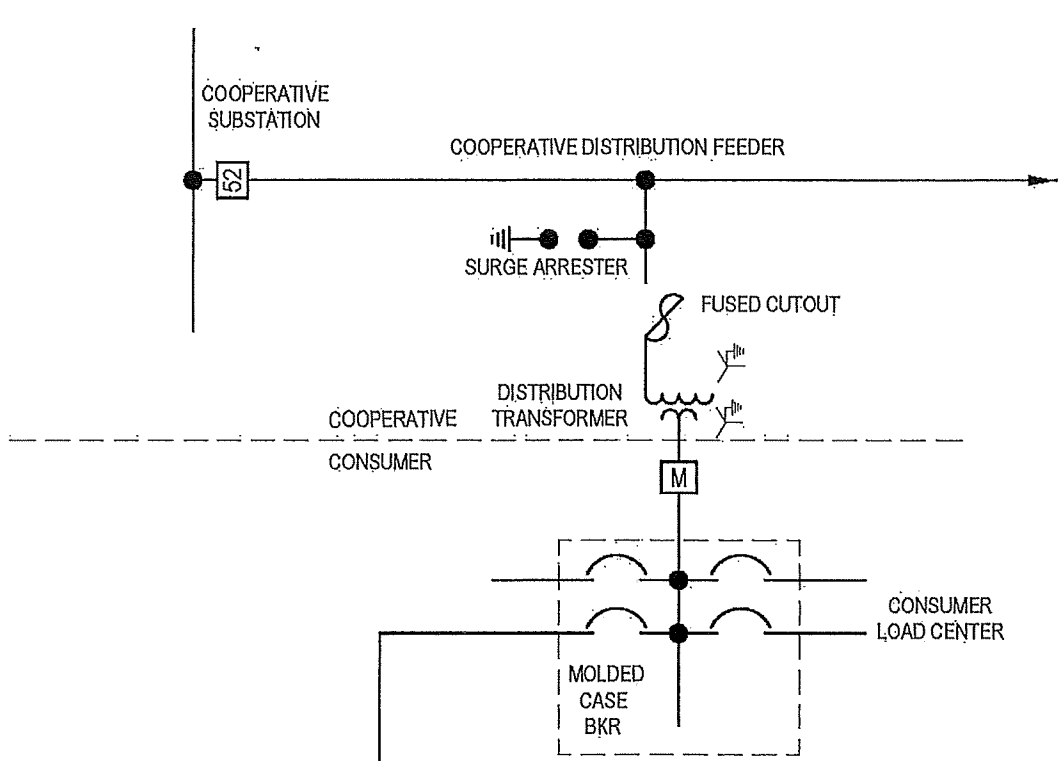
1. VT's CAN BE CONNECTED WYE OR OPEN DELTA.
2. GENERATOR GROUNDING SHOWN IS LOW IMPEDANCE, HIGH IMPEDANCE GROUNDING CAN BE USED IF DESIRED; HOWEVER A VT AND NEUTRAL OVER VOLTAGE RELAY (DEVICE 59N) MAY BE REQUIRED TO BE ADDED.
3. RELAYING DEVICES SHOWN ARE ALL PART OF A MULTI-FUNCTION RELAY EXCEPT FOR DEVICES 25 AND 86. FUNCTIONS CAN BE INCREASED OR DECREASED AS DICTATED BY THE PARTICULAR APPLICATION.
4. IF 52U IS RECLOSEING CIRCUIT BREAKER, RECLOSEING SHOULD BE SUPERVISED BY A VOLTAGE INPUT INSTALLED ON THE GENERATION SIDE OF THE RECLOSER (I.E. NO RECLOSEING AS LONG AS VOLTAGE IS PRESENT, INDICATING THAT THE GENERATION IS STILL ONLINE, TO AVOID AN OUT-OF-SYNC RECLOSE). ALL SYNCHRONIZATION WILL OCCUR AT 52G WITH THE REQUIRED SYNC-CHECK RELAY.
5. SWITCH MUST BE PAD LOCKABLE, MANUALLY OPERABLE, HAVE A VISIBLE LOAD BREAK AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES.
6. A CURRENT TRANSFORMER AND INSTANTANEOUS / TIME OVERCURRENT NEUTRAL RELAY MAY BE REQUIRED WITH THE INTERCONNECTION TRANSFORMER.
7. PROTECTION SPECIFICALLY FOR GENERATOR NOT SHOWN.
8. OTHER REQUIREMENTS MAY BE NEEDED ON THE COOPERATIVE DISTRIBUTION SYSTEM TO ACCOMMODATE THE INTERCONNECTION. THESE REQUIREMENTS WILL BE IDENTIFIED BY THE COOPERATIVE THROUGH ANY NEEDED STUDIES.

LEGEND

- | | | | |
|-----|--|------------------|--|
| M | COOPERATIVE REVENUE METER | 51N | TIME OVERCURRENT GROUND RELAY |
| 24 | PROTECTIVE RELAYS | 51V | VOLTAGE CONTROLLED TIME OVERCURRENT RELAY |
| 27 | VOLTS / HZ RELAY | 59 | OVERVOLTAGE RELAY |
| 32 | UNDERVOLTAGE RELAY | 60FL | FUSE LOSS DETECTION RELAY |
| 40 | REVERSE POWER (ANTI - MOTORING) RELAY | 81 O/U | OVER / UNDER FREQUENCY RELAY |
| 46 | LOSS OF FIELD RELAY | 86 | LOCKOUT RELAY |
| 50 | NEGATIVE SEQUENCE OVERCURRENT RELAY | 87 | DIFFERENTIAL RELAY |
| 50N | INSTANTANEOUS OVERCURRENT RELAY | CONTROL RELAYS : | |
| | | 25 | AUTOMATIC SYNCHRONIZER OR SYNC - CHECK RELAY |
| | | 52 | BREAKER |

PROTECTION FOR A THREE-PHASE
SYNCHRONOUS GENERATOR

CLAVERACK RURAL ELECTRIC COOPERATIVE
Wysox, Pennsylvania



LEGEND

- 25 SYNC - CHECK RELAY
- 27 UNDERVOLTAGE RELAY
- 52 CIRCUIT BREAKER OR RECLOSER
- 59 OVERVOLTAGE RELAY
- 81 O/U OVER / UNDER FREQUENCY
- M COOPERATIVE REVENUE METER

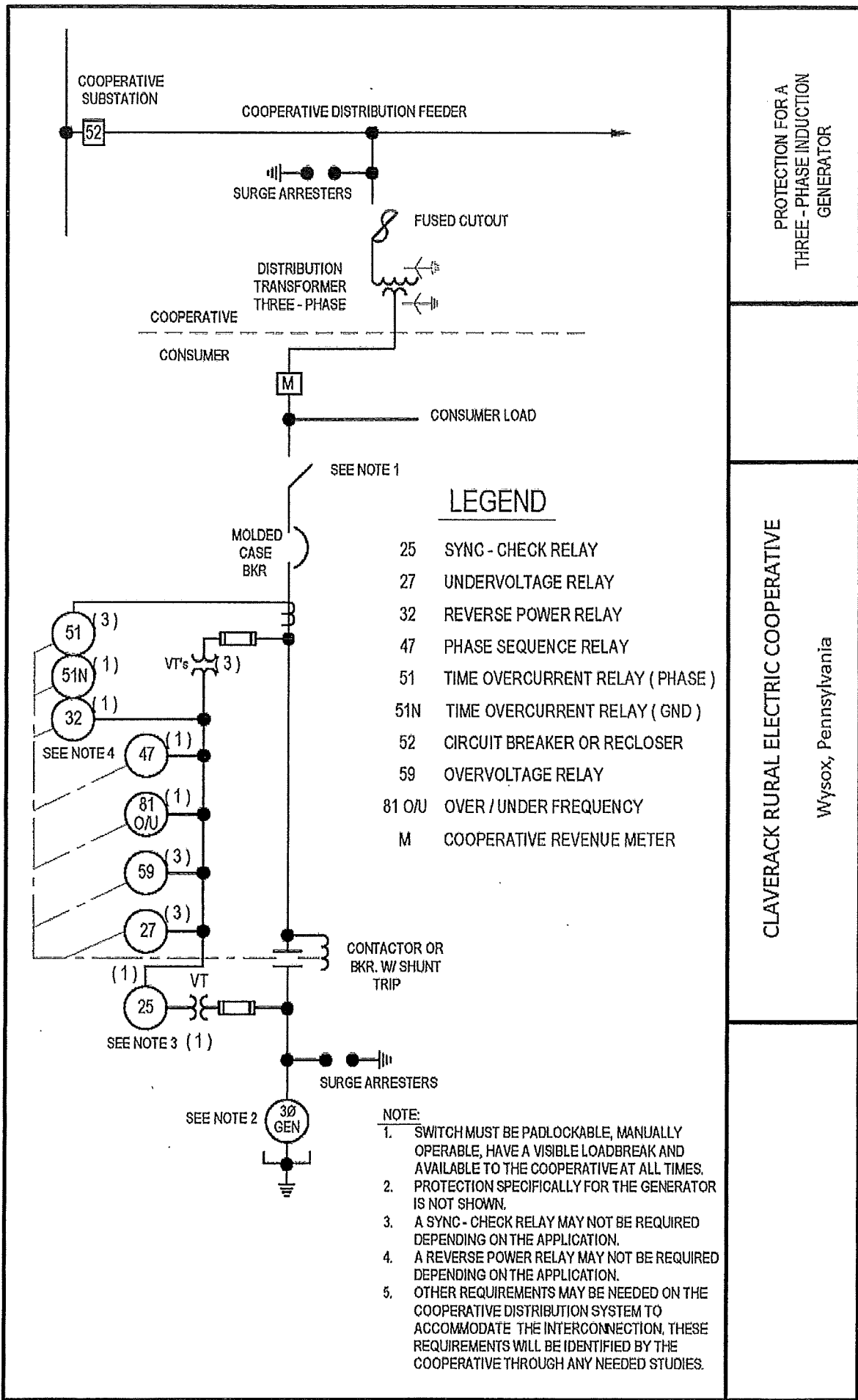
NOTES:

1. SWITCH MUST BE PADLOCKABLE, MANUALLY OPERABLE, WITH A VISIBLE LOAD BREAK AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES.
2. A VT MAY BE REQUIRED DEPENDING ON THE VOLTAGE AND RELAY RATINGS.
3. PROTECTION SPECIFICALLY FOR THE GENERATOR IS NOT SHOWN.
4. A SYNC-CHECK RELAY MAY NOT BE REQUIRED DEPENDING ON THE APPLICATION.
5. OTHER REQUIREMENTS MAY BE NEEDED ON THE COOPERATIVE DISTRIBUTION SYSTEM TO ACCOMMODATE THE INTERCONNECTION. THESE REQUIREMENTS WILL BE IDENTIFIED BY THE COOPERATIVE THROUGH ANY NEEDED STUDIES.

PROTECTION FOR A SINGLE-PHASE INDUCTION GENERATOR

CLAVERRACK RURAL ELECTRIC COOPERATIVE

Wysox, Pennsylvania



LEGEND

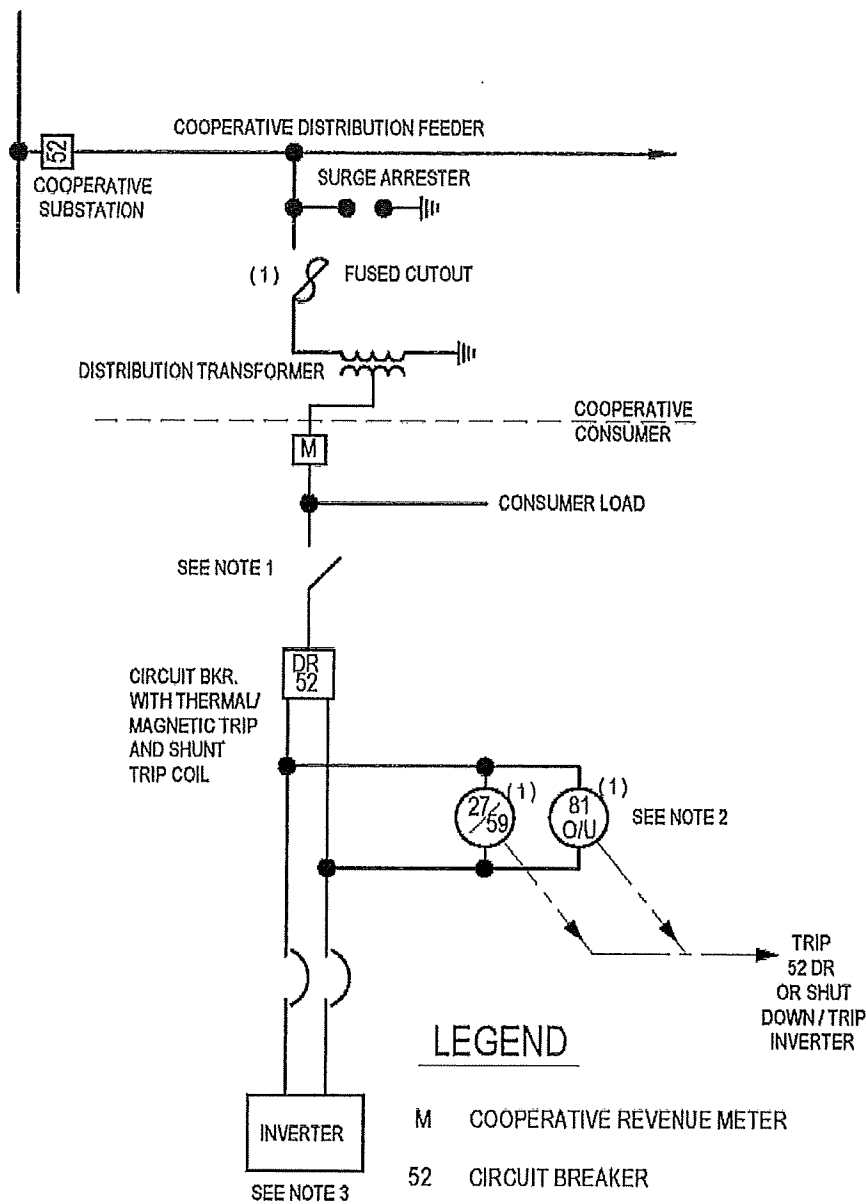
- 25 SYNC - CHECK RELAY
- 27 UNDERVOLTAGE RELAY
- 32 REVERSE POWER RELAY
- 47 PHASE SEQUENCE RELAY
- 51 TIME OVERCURRENT RELAY (PHASE)
- 51N TIME OVERCURRENT RELAY (GND)
- 52 CIRCUIT BREAKER OR RECLOSER
- 59 OVERVOLTAGE RELAY
- 81 O/U OVER / UNDER FREQUENCY
- M COOPERATIVE REVENUE METER

- NOTE:**
1. SWITCH MUST BE PADLOCKABLE, MANUALLY OPERABLE, HAVE A VISIBLE LOADBREAK AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES.
 2. PROTECTION SPECIFICALLY FOR THE GENERATOR IS NOT SHOWN.
 3. A SYNC - CHECK RELAY MAY NOT BE REQUIRED DEPENDING ON THE APPLICATION.
 4. A REVERSE POWER RELAY MAY NOT BE REQUIRED DEPENDING ON THE APPLICATION.
 5. OTHER REQUIREMENTS MAY BE NEEDED ON THE COOPERATIVE DISTRIBUTION SYSTEM TO ACCOMMODATE THE INTERCONNECTION, THESE REQUIREMENTS WILL BE IDENTIFIED BY THE COOPERATIVE THROUGH ANY NEEDED STUDIES.

PROTECTION FOR A
THREE - PHASE INDUCTION
GENERATOR

CLAVERRACK RURAL ELECTRIC COOPERATIVE

Wysox, Pennsylvania



LEGEND

- M COOPERATIVE REVENUE METER
- 52 CIRCUIT BREAKER
- 27/59 TIME UNDER/OVER VOLTAGE RELAY
- 81 O/U OVER/UNDER FREQUENCY RELAY

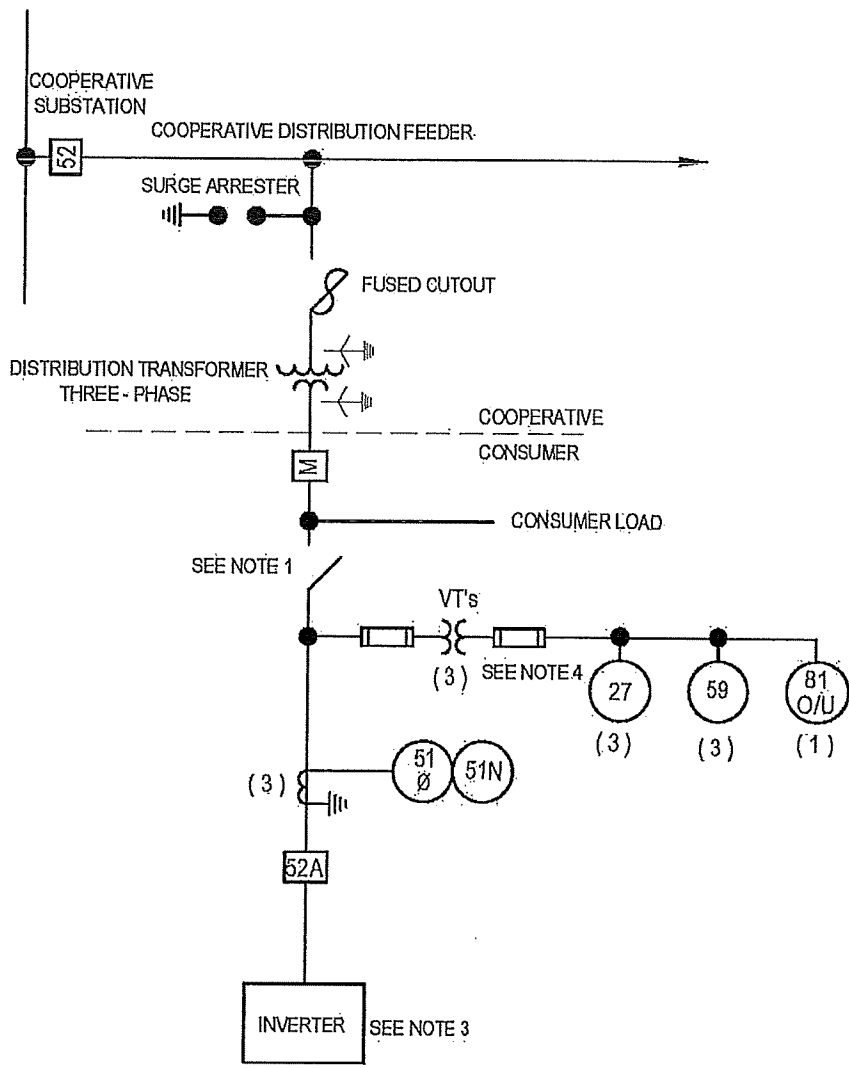
NOTE:

1. SWITCH MUST BE PADLOCKABLE, MANUALLY OPERABLE, WITH A VISIBLE LOAD BREAK AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES.
2. 27, 59 AND 81O/U PROTECTION ELEMENTS TYPICALLY INCLUDED WITH INVERTER.
3. SOURCE BEHIND INVERTER CAN BE BATTERY, FUEL CELL, PV OR OTHER DC SOURCE. POWER CONDITIONING SHOULD BE DONE BEFORE INVERTER AC OUTPUT.
4. OTHER REQUIREMENTS MAY BE NEEDED ON THE COOPERATIVE DISTRIBUTION SYSTEM TO ACCOMMODATE THE INTERCONNECTION. THESE REQUIREMENTS WILL BE IDENTIFIED BY THE COOPERATIVE THROUGH ANY NEEDED STUDIES.

PROTECTION FOR A SINGLE PHASE INVERTER

CLAVERACK RURAL ELECTRIC COOPERATIVE

Wysox, Pennsylvania



PROTECTION
FOR A THREE - PHASE
INVERTER

CLAVERACK RURAL ELECTRIC COOPERATIVE
Wysox, Pennsylvania

LEGEND

NOTE:

1. SWITCH MUST BE PADLOCKABLE, MANUALLY OPERABLE, WITH A VISIBLE LOAD BREAK AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES
2. ALL PROTECTIVE RELAYING TRIPS BREAKER 52A OR SHUTS DOWN / TRIP INVERTER.
3. SOURCE BEHIND INVERTER CAN BE BATTERY, FUEL CELL, PV OR OTHER DC SOURCE, POWER CONDITIONING SHOULD BE DONE BEFORE INVERTER AC OUTPUT.
4. 27, 59 AND 81 O/U PROTECTION ELEMENTS TYPICALLY INCLUDED WITH INVERTER.
5. OTHER REQUIREMENTS MAY BE NEEDED ON THE COOPERATIVE DISTRIBUTION SYSTEM TO ACCOMMODATE THE INTERCONNECTION. THESE REQUIREMENTS WILL BE IDENTIFIED BY THE COOPERATIVE THROUGH ANY NEEDED STUDIES.

- | | |
|--------|---------------------------|
| 27 | TIME UNDERVOLTAGE |
| 51 | TIME OVERCURRENT - PHASE |
| 51N | TIME OVERCURRENT - GROUND |
| 52 | CIRCUIT BREAKER. |
| 59 | TIME OVERVOLTAGE |
| 81 O/U | OVER / UNDER FREQUENCY |
| M | COOPERATIVE REVENUE METER |

CLAVERACK RURAL ELECTRIC COOPERATIVE, INC.

Policy Bulletin No. B-19

Appendix B

**AES SERVICE RATE SCHEDULES FOR
MEMBER ALTERNATIVE ENERGY PRODUCTION**

AVAILABILITY

Available in all territories served by the Cooperative. Subject to the established rules and regulations of the Cooperative, the aggregate capacity of members' alternative energy systems (AES) may be limited by the Cooperative's system, substation area and/or circuit.

APPLICABILITY

Applicable to all members of the Cooperative that comply with Policy B-19. The member's AES must: (1) be owned, operated, leased, or otherwise controlled by the member; (2) be operated in parallel with the Cooperative's distribution system; (3) be primarily intended to offset part or all of the member's electric generation requirements; and (4) be on the regular residential (excluding time-of-use), seasonal, or applicable commercial rate.

Member AESs that qualify under this Service Rate are solar photovoltaic or other solar energy, solar thermal energy, wind power, hydropower, biomass, and bio-digester gas and fuel cells as defined in the Pennsylvania Alternative Energy Portfolio Standards Act of 2004, as amended (Act 213-2004).

The member's AES must meet or exceed the standards and requirements of the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronics Engineers, Underwriters Laboratories, and any adjoining utility system(s), as well as the Cooperative's Policy on Alternative Energy Production; Safety and Interconnection Requirements for Alternative Energy Production; and local requirements.

The member must have executed a power purchase agreement with Allegheny Electric Cooperative, Inc. (Allegheny) (in some cases, such power purchase agreement may be combined with an interconnection agreement) to sell excess energy produced by the member's AES to Allegheny.

Members will fall under two different Rate Schedules as described below:

Rate Schedule 'A'

Available for member's AES in service on or before April 30, 2024. This Rate Schedule is not available for systems: (1) newly in service; (2) any existing AES that alters (i.e. increasing capacity) their systems; or (3) an AES account that is transferred to a different member after May 1, 2024. This Rate Schedule will be active until May 1, 2027. At that time, any AES under this Rate Schedule will be moved to Rate Schedule 'B'.

Rate Schedule 'B'

Available for all member's AES in service on or after May 1, 2024, and for any existing AES that alters their existing systems, or an AES account that is transferred to a different member.

TYPE OF SERVICE

Sixty (60) cycles, at available secondary voltage.

Service under these rate schedules requires metering equipment that can measure the flow of electricity in both directions.

COOPERATIVE MONTHLY BILLING

RATE SCHEDULE 'A'

The Cooperative bills the member monthly pursuant to the applicable Electric Rate Schedule under Policy B-04. The Cooperative shall credit an AES at the full retail rate for each kilowatt-hour produced by an AES installed on the member's side of the electric revenue meter, up to the total amount of electricity used by the member during an annual period. If the AES supplies more electrical energy to the cooperative distribution system than the Cooperative delivers to the member in a given billing period, the excess kilowatt-hours shall be carried forward and credited against the member's usage in subsequent billing periods at the full retail rate. Any excess kilowatt-hours shall continue to accumulate until the end of the production year. A production year shall be from June 1st through May 31st. At the end of each annual period, Allegheny shall compensate the AES for kilowatt-hours generated by the AES over the amount of kilowatt-hours delivered by the Cooperative during the billing period at Allegheny's avoided cost of wholesale power. If the calculated amount is under \$100, the excess kilowatt-hours shall be carried forward.

METER AGGREGATION FOR RATE SCHEDULE 'A'

The combination of readings from, and billing for, all meters regardless of rate class on properties owned or leased and operated by a member operating an AES within the Cooperative's service territory whether the aggregation is completed through physical or virtual meter aggregation within two miles of the member's property. For any AES involved in virtual meter aggregation, a credit shall be applied first to the meter through which the Cooperative supplies electricity to the distribution system, then through the remaining meters for the AES account equally at each meter's designated rate.

RATE SCHEDULE 'B'

The Cooperative bills the member monthly pursuant to the applicable Electric Rate Schedule under Policy B-04. The member will be billed for the total energy delivered (kWh delivered) to the member service location as measured by the billing meter. A monthly generation credit will be applied for the total energy received (kWh received) by the Cooperative from the member's AES during the billing month. The generation credit will be calculated by multiplying the total energy received (kWh received) by the Cooperative from the member's AES as measured by the billing meter times the Allegheny avoided cost of wholesale power rate then in effect. If the monthly generation credit exceeds the total monthly cost of electric service, including all billing components, the member will be credited the excess generation value on their subsequent bill. Any excess credit will accumulate until the end of the production year. A production year shall be from June 1st through May 31st. At the end of the production year, the Cooperative will evaluate the credit to determine if it will compensate the AES for the balance or continue to carry it forward.

METER AGGREGATION FOR RATE SCHEDULE 'B'

No meter aggregation is allowed under Rate Schedule 'B'.