

**REQUEST FOR PROPOSALS FOR**

**Long-term Ground Lease  
for Renewable Energy Generation on 90± acres  
in Napier Township, Bedford County  
The Former Albert Nunez Farm**

**ISSUING OFFICE**

**Pennsylvania Turnpike Commission  
Property Management Department**

**RFP NUMBER**

**10-10470-2424**

**DATE OF ISSUANCE**

**May 17, 2010**

**REQUEST FOR PROPOSALS FOR**  
**Long-term Ground Lease**  
**for Renewable Energy Generation on 90± acres**  
**in Napier Township, Bedford County**  
**RFP # 10-10470-2424**

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**Exhibit A - Site Plan**

**Exhibit B – Interconnection information from Bedford Rural Electric**

## PART I

### GENERAL INFORMATION FOR PROPOSERS

**I-1. Purpose.** This request for proposals (RFP) provides interested proposers with sufficient information to enable them to prepare and submit proposals for consideration by the Pennsylvania Turnpike Commission (Commission) for execution of a long-term ground lease of Commission property for a renewable energy generation facility. The Commission is offering a parcel of property in Napier Township, Bedford County for development pursuant to this RFP. The selected proposer is expected to design, construct, operate and maintain a renewable energy generation facility at this location. Proposers will be responsible for all aspects of the design, construction, operation and maintenance of the facility, including but not limited to zoning, permitting, development, interconnection agreements with utilities, historic and environmental issues, and all other associated requirements. Additionally, the proposer should consider the various potential options of remuneration to the Commission including a straight land lease, energy credits, power usage, or any other acceptable combination of compensation.

**I-2. Issuing Office.** This RFP is issued for the Commission by the Property Management Department.

**I-3. Scope.** This RFP contains instructions governing the proposals to be submitted and the material to be included therein; requirements which must be met to be eligible for consideration; general evaluation criteria; and other requirements to be met by each proposal.

**I-4. The Site.** The Commission will consider entering into a long-term, **unsubordinated** ground lease of 90± acres in Napier Township, Bedford County, Pennsylvania, as generally shown on the attached Exhibit "A". The site is located on both sides of the Pennsylvania Turnpike at Milepost 136.8±, and is accessed via Pennsylvania Route 31 and Faupel Road, T-418. Proposers are responsible for identifying all site conditions including but not limited to flood plain limits. The service provider for this property is Bedford Rural Electric. Interconnect information from Bedford Rural Electric is attached as Exhibit "B".

**I-5. Type of Contract.** It is proposed that if a contract is entered into as a result of this RFP, it will be in the form of an unsubordinated ground lease. The Commission may in its sole discretion undertake negotiations with proposers, whose proposals as to lease rates and other factors show them to be qualified, responsible, and capable of undertaking the development.

**I-6. Rejection of Proposals.** The Commission reserves the right to reject any and all proposals received as a result of this RFP, to cancel the solicitation requested under this notice, to re-advertise solicitation for this lease, or to negotiate separately with competing proposers.

**I-7. Subcontracting.** Any use of subcontractors by a Proposer must be identified in the proposal. During the contract period use of any subcontractors by the selected Proposer, which were not previously identified in the proposal, must be approved in advance in writing by the Commission.

A firm that responds to this solicitation as a prime may not be included as a designated subcontractor to another firm that responds to the same solicitation. **Multiple responses under any of the foregoing situations may cause the rejection of all responses of the firm or firms involved.** This does not

preclude a firm from being set forth as a designated subcontractor to more than one prime contractor responding to the project advertisement.

**I-8. Incurring Costs.** The Commission is not liable for any costs the Proposer incurs in preparation and submission of its proposal, in participating in the RFP process or in anticipation of award of contract.

**I-9. Mandatory Pre-proposal Conference.** A **mandatory** pre-proposal conference will be held **Wednesday, June 9, 2010 at 10:00 a.m. at the PTC Administration Building located at 700 S. Eisenhower Blvd., Middletown, Pa 17057.** The purpose of this conference is to clarify any points in the RFP, which may not have been clearly understood. Questions should be forwarded prior to the meeting to ensure sufficient analysis can be made before an answer is supplied. Written questions should be submitted by email to [RFP-Q@paturndpike.com](mailto:RFP-Q@paturndpike.com) with **RFP 10-10470-2424** in the Subject Line to be received no later than **June 1, 2010 at 12:00 pm.** In view of the limited facilities available for the conference, it is requested representation be limited to two individuals per Proposer. The pre-proposal conference is for information only. Answers furnished during the conference will not be official until verified, in writing, by the Issuing Office. All questions and written answers will be issued as an addendum to and become part of this RFP.

**FAILURE TO BE REPRESENTED AND SIGNED IN AT THIS MANDATORY PRE-PROPOSAL CONFERENCE WILL BE CAUSE FOR REJECTION OF PROPOSAL.**

**I-10. Addenda to the RFP.** If it becomes necessary to revise any part of this RFP before the proposal response date, addenda will be posted to the Commission's website under the original RFP document. It is the responsibility of the Proposer to periodically check the website for any new information or addenda to the RFP.

The Commission may revise a published advertisement. If the Commission revises a published advertisement less than ten days before the RFP due date, the due date will be extended to maintain the minimum ten-day advertisement duration if the revision alters the project scope or selection criteria. Firms are responsible to monitor advertisements/addenda to ensure the submitted proposal complies with any changes in the published advertisement.

**I-11. Response.** To be considered, proposals must be delivered to the Pennsylvania Turnpike Commission's Contracts Administration Department, Attention: Wanda Metzger, on or before **12:00 Noon, Wednesday, July 14, 2010.** The Pennsylvania Turnpike Commission is located at 700 South Eisenhower Boulevard, Middletown, PA 17057 (Street address). Our mailing Address is P. O. Box 67676, Harrisburg, PA 17106.

**Please note that use of U.S. Mail delivery does not guarantee delivery to this address by the above-listed time for submission.** Proposers mailing proposals should allow sufficient delivery time to ensure timely receipt of their proposals. If the Commission office location to which proposals are to be delivered is closed on the proposal response date, due to inclement weather, natural disaster, or any other cause, the deadline for submission shall be automatically extended until the next Commission business day on which the office is open. Unless the Proposers are otherwise notified by the Commission, the time for submission of proposals shall remain the same.

**I-12. Proposals.** To be considered, proposers should submit a complete response to this RFP, using the format provided in PART II. Each proposal should be submitted in **seven (7) hard copies** and **one (1) CD-ROM** to the Contract Administration Department. No other distribution of proposals should be made by the proposer. Each proposal page should be numbered for ease of reference. Proposals must be signed by an official authorized to bind the proposer to its provisions and include the proposer's Federal Identification Number. For this RFP, the proposal must remain valid for at least 120 days. Moreover, the contents of the proposal of the selected proposer will become contractual obligations if a lease is entered into.

Each and every proposer submitting a proposal specifically waives any right to withdraw or modify it, except as hereinafter provided. Proposals may be withdrawn by written or telefax notice received at the Commission's address for proposal delivery prior to the exact hour and date specified for proposal receipt. However, if the proposer chooses to attempt to provide such written notice by telefax transmission, the Commission shall not be responsible or liable for errors in telefax transmission. A proposal may also be withdrawn in person by a proposer or its authorized representative, provided its identity is made known and it signs a receipt for the proposal, but only if the withdrawal is made prior to the exact hour and date set for proposal receipt. A proposal may only be modified by the submission of a new sealed proposal or submission of a sealed modification which complies with the requirements of this RFP.

**I-13. Economy of Preparation.** Proposals should be prepared simply and economically, providing a straightforward, concise description of the proposer's ability to meet the requirements of the RFP.

**I-14. Discussions for Clarification.** Proposers who submit proposals may be required to make an oral or written clarification of their proposals to the Commission to ensure thorough mutual understanding and proposer responsiveness to the solicitation requirements. The Issuing Office will initiate requests for clarification.

**I-15. Best and Final Offers.** The Issuing Office reserves the right to conduct discussions with Proposers for the purpose of obtaining "best and final offers." To obtain best and final offers from Proposers, the Issuing Office may do one or more of the following: a) enter into pre-selection negotiations; b) schedule oral presentations; and c) request revised proposals. The Issuing Office will limit any discussions to responsible Proposers whose proposals the Issuing Office has determined to be reasonably susceptible of being selected for award.

**I-16. Prime Proposer Responsibilities.** The selected Proposer will be required to assume responsibility for all services offered in its proposal whether or not it produces them. Further, the Commission will consider the selected Proposer to be the sole point of contact with regard to contractual matters. The selected Proposer will be expected to provide soft copies of all engineering related approvals and design files in a format acceptable to the Commission.

**I-17. Proposal Contents.** Proposals will be held in confidence and will not be revealed or discussed with competitors, unless disclosure is required to be made (i) under the provisions of any Commonwealth or United States statute or regulation; or (ii) by rule or order of any court of competent jurisdiction. All material submitted with the proposal becomes the property of the Pennsylvania Turnpike Commission and may be returned only at the Commission's option. Proposals submitted to the Commission may be reviewed and evaluated by any person other than competing Proposers at the

discretion of the Commission. The Commission has the right to use any or all ideas presented in any proposal. Selection or rejection of the proposal does not affect this right.

In accordance with the Pennsylvania Right-to-Know Law (RTKL), 65 P.S. § 67.707 (Production of Certain Records), Proposers shall identify any and all portions of their Proposal that contains confidential proprietary information or is protected by a trade secret. Proposals shall include a written statement signed by a representative of the company/firm identifying the specific portion(s) of the Proposal that contains the trade secret or confidential proprietary information.

Proposers should note that “trade secrets” and “confidential proprietary information” are exempt from access under Section 708(b)(11) of the RTKL. Section 102 defines both “trade secrets” and “confidential proprietary information” as follows:

Confidential proprietary information: Commercial or financial information received by an agency: (1) which is privileged or confidential; **and** (2) the disclosure of which would cause substantial harm to the competitive position of the person that submitted the information.

Trade secret: Information, including a formula, drawing, pattern, compilation, including a customer list, program, device, method, technique or process that: (1) derives independent economic value, actual or potential, from not being generally known to and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use; **and** (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy. The term includes data processing software by an agency under a licensing agreement prohibiting disclosure.

65 P.S. §67.102 (emphasis added).

The Office of Open Records has determined that a third party must establish a trade secret based upon factors established by the appellate courts, which include the following:

- the extent to which the information is known outside of his business;
- the extent to which the information is known by employees and others in the business;
- the extent of measures taken to guard the secrecy of the information;
- the value of the information to his business and to competitors;
- the amount of effort or money expended in developing the information; and
- the ease of difficulty with which the information could be properly acquired or duplicated by others.

*See Crum v. Bridgestone/Firestone North Amer. Tire.*, 907 A.2d 578, 585 (Pa. Super. 2006).

The Office of Open Records also notes that with regard to “confidential proprietary information the standard is equally high and may only be established when the party asserting protection shows that the information at issue is either ‘commercial’ or ‘financial’ and is privileged or confidential, and the disclosure **would** cause substantial competitive harm.” (emphasis in original).

For more information regarding the RTKL, visit the Office of Open Records’ website at [www.openrecords.state.pa.us](http://www.openrecords.state.pa.us).

**I-18. Debriefing Conferences.** Proposers whose proposals are not selected will be notified of the name of the selected Proposer and given the opportunity to be debriefed, at the Proposer’s request. The Issuing Office will schedule the time and location of the debriefing. The Proposer will not be compared with other Proposers, other than the position of its proposal in relation to all other proposals.

**I-19. News Releases.** News releases pertaining to this project will not be made without prior Commission approval, and then only in coordination with the Issuing Office.

**I-20. Commission Participation.** Unless specifically noted in this section, Proposers must provide all services to complete the identified work.

**I-21. Lease/Remuneration Rates Submittal.** The lease and remuneration rates submittal shall be placed in a separately sealed envelope within the sealed proposal and kept separate from the remainder of the proposal. **Failure to meet this requirement will result in disqualification of the proposal.**

**I-22. Term of Lease.** The proposer may propose any lease term, provided that the full term of the lease, including extensions, shall be a minimum of 20 years but shall not exceed 70 years.

**I-23. Deposits.** The successful proposer shall be required to pay to the Commission a security deposit as set forth herein as security for performance of the successful proposer's obligations under the lease. At the signing of the lease, the successful proposer shall be required to pay a non-refundable deposit in the amount of \$30,000. Within 30 days after all governmental and utility approvals have been secured, the successful proposer will be required to pay an additional non-refundable deposit in the amount of \$45,000. These deposits shall constitute a security deposit that shall be held in a non-interest bearing account. In the event, after all due diligence has been completed, it is determined that this property cannot be developed into a renewable energy generation facility, the Commission shall refund the security deposit to the Lessee. In the event the Lessee fully complies with all the terms and conditions of the Lease, the security deposit shall be refunded to Lessee upon expiration of the Lease.

**I-24. Available Acreage.** Approximately 90 acres are available for lease.

**I-25. Rent Commencement Date.** Rental payments will begin 90 days after all government and utility approvals have been obtained, or twelve months from the date of the signing of the lease, whichever occurs first. The Commission reserves the right to extend the time period under this paragraph. Other payment commencement dates shall be set forth in your proposal.

**I-26. Zoning.** Currently there is no zoning in Napier Township. Please note that the Commission is not responsible for the accuracy of this information. Proposers should conduct their own investigations regarding zoning, utility availability, adequate access, land use and development laws, regulations, and ordinances, etc. The successful proposer will be responsible for obtaining any zoning, land use, and land development approvals, and all other approvals necessary for the development and use at the proposer's sole expense.

**I-27. Adherence to Laws.** All proposals must conform to all applicable Napier Township, Bedford County, and Commonwealth of Pennsylvania building codes, and to all other local, state and federal laws, regulations and requirements.

**I-28. Brokerage.** The Commission will not retain a real estate broker for this project. Any brokers involved must act as the proposer's agent only; all commissions to be paid will be the sole responsibility of the proposer.

**I-29. Proposer's Representations and Authorizations.** Each Proposer by submitting its proposal understands, represents, and acknowledges that:

- a. All information provided by, and representations made by, the Proposer in the proposal are material and important and will be relied upon by the Issuing Office in awarding the contract(s). Any misstatement, omission or misrepresentation shall be treated as fraudulent concealment from the Issuing Office of the true facts relating to the submission of this proposal. A misrepresentation shall be punishable under 18 Pa. C.S. 4904.
- b. The price(s) and amount of this proposal have been arrived at independently and without consultation, communication or agreement with any other Proposer or potential Proposer.
- c. Neither the price(s) nor the amount of the proposal, and neither the approximate price(s) nor the approximate amount of this proposal, have been disclosed to any other firm or person who is a Proposer or potential Proposer, and they will not be disclosed on or before the proposal submission deadline specified in the cover letter to this RFP.
- d. No attempt has been made or will be made to induce any firm or person to refrain from submitting a proposal on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.
- e. The proposal is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.
- f. To the best knowledge of the person signing the proposal for the Proposer, the Proposer, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as disclosed by the Proposer in its proposal.
- g. To the best of the knowledge of the person signing the proposal for the Proposer and except as otherwise disclosed by the Proposer in its proposal, the Proposer has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Proposer that is owed to the Commonwealth.
- h. The Proposer is not currently under suspension or debarment by the Commonwealth, or any other state, or the federal government, and if the Proposer cannot certify, then it shall submit along with the proposal a written explanation of why such certification cannot be made.
- i. The Proposer has not, under separate contract with the Issuing Office, made any recommendations to the Issuing Office concerning the need for the services described in the proposal or the specifications for the services described in the proposal.



- j. Each Proposer, by submitting its proposal, authorizes all Commonwealth agencies to release to the Commission information related to liabilities to the Commonwealth including, but not limited to, taxes, unemployment compensation, and workers' compensation liabilities.

**I-30. Use Restrictions.** Proposals for this project are specifically limited in scope to be a renewable energy generation facility. No other uses will be considered for this proposal. There will NO converting of woodland to open land for development. Only the existing cleared and cultivated areas of this property are to be considered for development of the renewable energy generation facility, and the area of the former Faupel Road is to be left for vehicular travel. Proposers understand that there is limited access to this property. Proposers should familiarize themselves with the property and identify any necessary modifications/improvements to the former Faupel Road needed for construction of the renewable energy generation facility, and any required accessibility not currently available.

**I-31. Payments in Lieu of Taxes.** The site is tax-exempt as a result of the Commission's status as an instrumentality of the Commonwealth. In order to benefit the local municipality and its citizens, the successful proposer will be required by the terms of the lease to make payments in lieu of taxes to the local taxing authority.

**I-32. Performance/Payment Bond.** When awarded the contract, furnish a Performance Bond, with sufficient surety or sureties, in an amount equal to 100% of the contract price. Have the bond specify that the contracted work will be completed in a manner satisfactory to the Commission. Have the bond state that the Commission is not liable for any expenses incurred through the failure to complete the work as specified, nor liable for any damages growing out of the carelessness of the Contractor, the Contractor's employees, or subcontractors. Also furnish a Payment Bond in the amount of 100% of the contract price. Have a corporate surety, legally authorized to transact business in the State and satisfactory to the Commission, execute both bonds. If the Commission decides the bond surety is unsatisfactory, promptly furnish any additional required security to protect the Commission's interests and the interests of all persons, firms, or corporations who/which have furnished material, provided equipment on rental, or supplied/performed labor or services on, or in connection with, the performance of the work for this contract.

Have participants in a joint venture submit a single Performance Bond and a single Payment bond, each signed by both the joint participants and by their surety. These bonds are to cover their joint and individual liability.

**I-33. Insurance.**

**(a) General.** The Lessee shall not commence work under this contract until Lessee has obtained all insurance required under this Section and such insurance has been approved by the Commission, nor shall the Lessee allow any Subcontractor to commence work until the insurance required of the Subcontractor has been so obtained and approved. The Lessee shall maintain, at its own expense, throughout the period of the Contract, and any extensions thereof, the following minimum insurance coverage's of the types and in the amounts described below that are applicable to the scope of work being performed:

**(b) Workers Compensation Insurance.** Workers compensation insurance as required by the Workers Compensation or Occupational Disease Laws of the Commonwealth of Pennsylvania or any other state, if applicable, including, when required, the United States Longshoremen's and Harbor Workers Act, the Federal Employers Liability Act and the Jones Act, covering all employees who perform any of the obligations of the Lessee under the Contract. If an employer or employee is not subject to workers compensation laws of the governing State, then the insurance shall be obtained voluntarily to extend to the employer and employee coverage to the same extent as though the employer or employee were subject to the workers compensation laws.

**(c) Employer's Liability Insurance.** Employer's liability insurance with limits of not less than \$500,000 bodily injury each accident, \$500,000 bodily injury by disease, and \$500,000 bodily injury by disease each employee.

**(d) Commercial General Liability Insurance.** Commercial general liability insurance (CGL) with limits not less than \$2,000,000 each occurrence. If the CGL contains a general aggregate limit, at the request of the Commission, it shall apply separately each site or location. CGL insurance shall be written on the Insurance Services Office Inc. (ISO) occurrence form (or substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under contract (including the tort liability of another assumed in a business contract). There shall be no endorsement or modification of the CGL coverage limiting the scope of coverage for liability arising from explosion, collapse, and underground property damage.

**(e) Business Auto Liability Insurance.** Business auto liability insurance with a limit of not less than \$1,000,000 each accident. Such insurance shall cover the liability, including bodily injury or death and property damage, arising out of any auto (including owned, hired, and non-owned autos). Business auto coverage shall be written on the ISO form or a substitute form providing equivalent liability coverage.

**(f) Commercial Umbrella Liability Insurance.** Commercial umbrella liability insurance (not Excess Liability Insurance) with a limit of not less than \$5,000,000 per occurrence, \$5 million General Aggregate and \$5 million Completed Operations.

**(g) Professional Liability Insurance.** All architects and engineers working under the Contract shall have insurance coverage's for Errors and Omissions (professional Liability Insurance) in an amount not less than \$1,000,000 each occurrence.

**(h) Aircraft and Watercraft Liability Insurance.** Aircraft and watercraft liability insurance for owned, non-owned, and hired craft is required when such craft is used by the Lessee in performance of work hereunder. The limits of liability will be determined by the Commission. In no event will aircraft or watercraft be used in the performance of work hereunder by the Lessee without the prior written consent of the Commission.

**(i) Environmental Impairment Liability Insurance.** When the scope of services or work under this Contract includes hazardous substances or the transportation of hazardous substances to or away from the Commission's premises and the proper disposal of such substances at a waste disposal site or the contracted services will be those of environmental consultants or engineers, and remedial action (pollution cleanup) contractors, Lessee shall purchase and maintain environmental impairment liability

(EIL) insurance. The policy of insurance affording this coverage shall be maintained in an amount not less than \$5,000,000 per loss.

**(j) Subcontractor Insurance Requirements.** Lessee shall cause each subcontractor employed by Lessee to maintain at least equal insurance coverage as is required of the Lessee herein. When requested by the Commission, Lessee shall furnish copies of certificates of insurance evidencing such coverage for each sub contractor.

#### **INSURED STATUS**

Commercial General Liability, Automobile Liability and Umbrella Liability policies will name the Pennsylvania Turnpike Commission, the Commonwealth of Pennsylvania, Pennsylvania Department of Transportation, Michael Baker, Jr., Inc., as an Additional Insured.

#### **WAIVER OF SUBROGATION**

Lessee waives all rights of subrogation against the Commission, its directors, commissioners, officers, and employees for recovery of damages to the extent these damages are covered by any of the Lessee's insurance policies maintained above.

#### **INSURANCE COMPANIES AND UNDERWRITERS**

The insurance coverage's required hereunder shall be placed with insurers and underwriters that have an A.M. Best's rating of no less than A- (Excellent) with a financial size category of X, or better.

## PART II

### INFORMATION REQUIRED FROM PROPOSERS

Proposals must be submitted in the format, including heading descriptions, outlined below. To be considered, the proposal must respond to all requirements in this part of the RFP. Any other information thought to be relevant, but not applicable to the enumerated categories, should be provided as an appendix to the proposal. Each proposal shall consist of two (2) separately sealed submittals. The submittals are as follows: (i) Development Submittal, in response to Sections II-1 through II-7 hereof; (ii) Lease Rates Submittal, in response to Section II-8 hereof.

The Commission reserves the right to request additional information which, in the Commission's opinion, is necessary to assure that the proposer's competence, number of qualified employees, business organization, and financial resources are adequate to perform according to the RFP.

The Commission may make such investigations as deemed necessary to determine the ability of the proposer to complete the development, and the proposer shall furnish to the Issuing Office all such information and data for this purpose as requested by the Commission. The Commission reserves the right to reject any proposal if the evidence submitted by, or investigation of, such proposer fails to satisfy the Commission that such proposer is properly qualified to carry out the obligations of the lease agreement

**II-1. Proposed Development.** State in succinct terms your plan for development of the parcel in question. Describe in narrative form the proposed extent and location of the property proposed for development of the renewable energy generation facility. If only a portion of the property is proposed for leasing and development, the specific limits of that proposed development must be shown and described. If all of the property is proposed for development and phasing is anticipated, the proposed phases must be outlined.

**II-2. Prior Experience.** Describe the specialized experience and technical competence of the proposer and the proposer's team, if any. Include descriptions of previous renewable energy generation projects, if any. Experience shown should be work done by individuals who will be involved with this development, as well as that of your company. The proposer should submit résumés and a brief summary of the previous experience of its consultants and/or architects who will be assisting with the project. Studies or projects referred to should be identified and the name of the customer shown, including the name, address, and telephone number of the responsible official of the customer, company, or agency who may be contacted.

**II-3. Financial Status.** Describe how the project will be financed. Provide financial references, along with the financial statements of the proposer. The proposer must submit 2007 and 2008 year-end audited financial statements, if available. Financial statements should include income statements, balance sheets and cash-flow statements, along with accompanying notes. For confidentiality information see section I-17 for RTKL requirements. The information will be used only for evaluating the financial stability of the proposer.

**II-4. Location.** Identify the location of the proposer, including principal and branch offices, if any.

**II-5. Sketch Plan.** Proposers should submit a sketch plan of the site, showing the proposed development and how operation and maintenance would be handled post development.

**II-6. Subordination.** Proposers must specify within their proposals that the lease will be *unsubordinated*. The successful proposer may obtain financing through its leasehold interest, but may not mortgage the real estate itself.

**II-7. DBE/MBE/WBE Participation.** The Turnpike Commission is committed to the inclusion of disadvantaged, minority, and woman firms in contracting opportunities. Responding firms shall clearly identify DBE/MBE/WBE firms, expected to participate in this contract, in their Proposal. Proposed DBE/MBE/WBE firms must be certified by the Pennsylvania Department of General Services ([www.dgs.state.pa.us](http://www.dgs.state.pa.us)) or the Pennsylvania Unified Certification Program ([www.paucp.com](http://www.paucp.com)) at the time of the submission of the proposal. While D/M/WBE participation is not a requirement for this RFP, inclusion of D/M/WBEs will be a factor in the evaluation determination. **If further information is desired concerning DBE/MBE/WBE participation,** direct inquiries to the Pennsylvania Turnpike Commission's Contract Administration Department by calling (717) 939-9551 Ext. 4241.

**II-8. Lease Rates Submittal.** Proposers should include the proposed annual rental payment and/or other remuneration to the Commission, plus escalation clauses or specified increases over the life of the lease. **The lease rates submittal shall be placed in a separately sealed envelope within the sealed proposal and kept separate from the remainder of the proposal.**

## PART III

### CRITERIA FOR SELECTION

**III-1. Mandatory Responsiveness Requirements.** To be eligible for selection, a proposal should be (a) timely received from a Proposer; (b) properly signed by the Proposer; and (c) formatted such that all lease rates data is kept separate from and not included in the Technical Submittal.

**III-2.** Proposals will be reviewed and evaluated by a committee of qualified personnel selected by the Commission. This committee will recommend for selection the proposal that most closely meets the requirements of the RFP and satisfies Commission needs. Award will only be made to a proposer determined to be responsible in accordance with Commonwealth Management Directive 215.9, Contractor Responsibility Program.

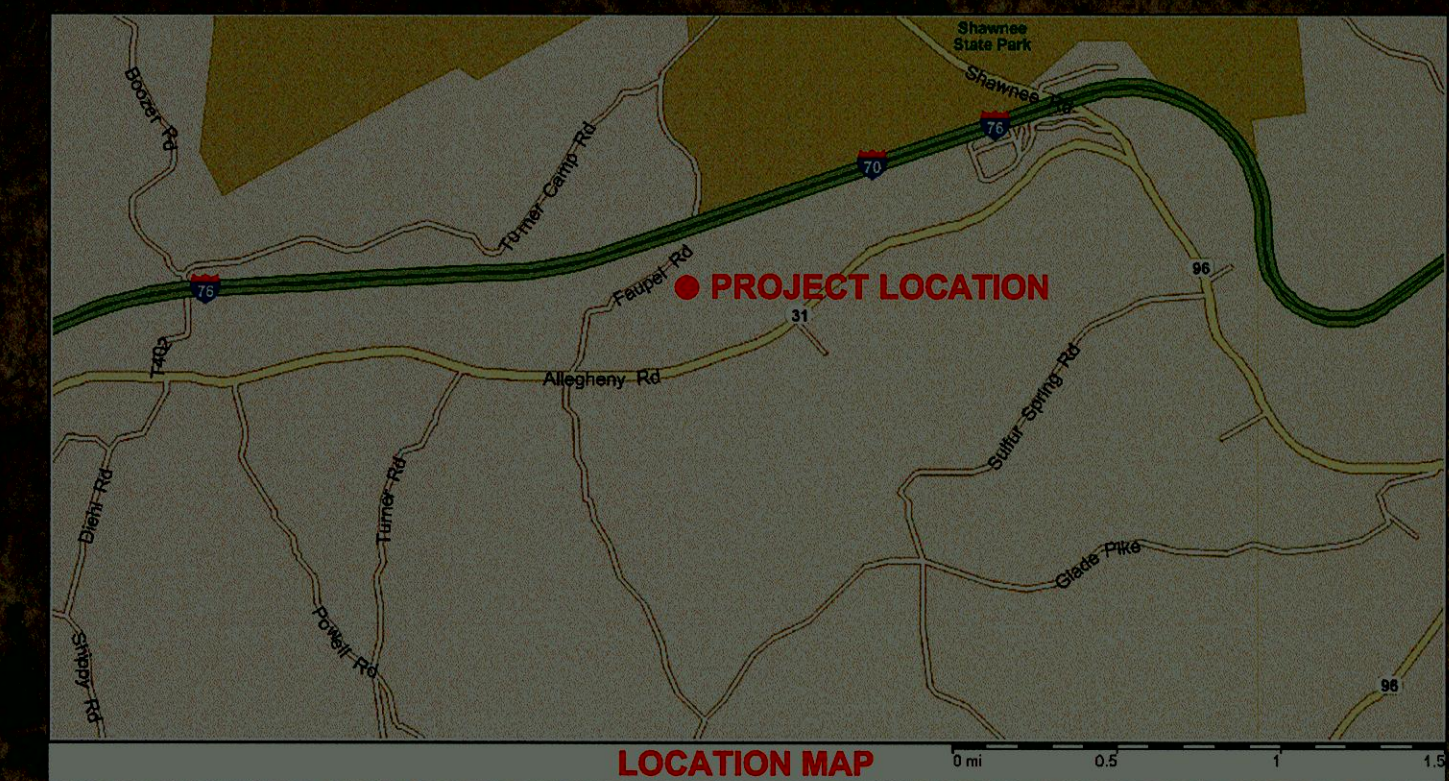
**III-3.** The following criteria will be used in evaluating each proposal:

**a. Prior Experience.** The Commission will consider the prior experience and technical competence of the proposer. If the proposer has developed other solar farms, the Commission will consider this prior project experience.

**b. Financial Status.** The Commission will consider the financial status of the proposer, the proposer's financial references, and the proposer's planned financing of the development.

**c. Lease Rates.** Financial benefit to the Commission will be one factor only in the selection process. While this area may be weighted heavily, it will not necessarily be the deciding factor in the selection process. The Commission reserves the right to select a proposal based upon all the factors listed above, and will not necessarily choose the developer offering the highest financial return to the Commission. The Commission will select the firm with the proposal that best meets the needs and desires of the Commission, in the sole discretion of the Commission.

**d. DBE/MBE/WBE Participation.** This refers to the inclusion of D/M/WBE firms, as described in Part II-7, and the extent to which they are expected to participate in this contract. Participation will be measured in terms of total dollars committed to certified D/M/WBE firms.



PREPARED BY:  
  
PREPARED FOR:  
THE PENNSYLVANIA  
TURNPIKE COMMISSION



NO.	REVISIONS	DATE	APPR.

WBS NO.  
NETWORK NUMBER:  
FILE NAME:  
DRAWING TYPE:  
STRUCTURE NUMBER:  
SCALE: 1" = 200'

**LEGEND**  
 AREA AVAILABLE UNDER THIS RFP  
 AREA EXCLUDED FROM THIS RFP  
 DISTRICT: 2 COUNTY: BEDFORD  
 TOWNSHIP / BOROUGH: NAPIER

**EXHIBIT "A"**  
**RENEWABLE ENERGY GENERATION FACILITY**  
 DRAWING: 1 OF 1  
 SHEET: 1 OF 1

**BEDFORD RURAL ELECTRIC COOPERATIVE, INC.**

**POLICY on ALTERNATE ENERGY PRODUCTION**

It is the policy of *Bedford 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 Alternate Energy Portfolio Standards Act of 2004 (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's (Allegheny) avoided costs. The interconnection of a AES/QF and the Cooperative's distribution system is subject to the following conditions:

- A. If the AES/QF has nondiscriminatory access to one of the following: (1) independently administered, auction-based day ahead and real time energy markets and wholesale markets for long-term capacity sales, or (2) an open access transmission and interconnection service provided by a FERC-approved regional transmission organization and competitive wholesale markets that provide an opportunity to sell capacity and energy, then Allegheny's obligation to purchase the energy and capacity generated by a AES/QF may be waived by petitioning FERC for relief from the obligation to purchase energy and capacity on a service territory-wide basis by demonstrating that options (1) and (2) are available to the AES/QF.
- B. Prior to the time of interconnection, the AES/QF Owner must submit to the Cooperative complete and detailed electrical drawings, signed by a licensed Pennsylvania Professional Engineer of the AES/QF. Any new or proposed AES/QF must undergo an operational, safety, and technical screening and review to determine potential effects on the Cooperative's electrical system. The AES/QF Owner shall provide the Cooperative with a Certificate of Completion when the unit is ready to be energized. Written approval must be received from the Cooperative prior to the physical interconnection of the AES/QF to the Cooperative's electrical system. The **SAFETY & INTERCONNECTION**



*REQUIREMENTS FOR ALTERNATE ENERGY PRODUCTION Document* provides additional details regarding the evaluation of proposed generators.

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 transformer capacity and service conductor size or length.
3. Change or addition of type of service; e.g.
  - a. Single-phase to three-phase.
  - b. Voltage change (120/240 to 240/480, etc.).
4. Line extension or system upgrade for a AES/QF.
  - a. Single-phase line extension to the facility
  - b. Three-phase extension line to the facility
  - c. Reconductoring a circuit to increase current carrying capability

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. Proper grounding is imperative in ensuring safe operation. NEC Section 250-2005 and IEEE Green Book ANSI C114.1-1973 / IEEE Standard 142-1972 should be referenced.

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

- C. The interconnection equipment must be of a "fail safe" design to ensure, in the event of any electrical supply or equipment failure, that the AES/QF's and the Cooperative's electrical system will be physically separated automatically. To prevent islanding on specific AES/QF applications, a transfer trip scheme may be required. The AES/QF will remain separated until the Cooperative's electrical system returns to its normal operating status. The AES/QF will synchronize with the Cooperative's electrical system only when the Cooperative electrical facilities' voltage and frequency are within acceptable

industry tolerances. Adherence to IEEE 1547-2003 relaying guidelines is required.

The AES/QF electrical system should be able to withstand all expected electrical transients that occur on Cooperative's electrical distribution and transmission systems, including outages. For instance, fuse coordination and operation of Cooperative reclosers should not cause damage that would require repair of the AES/QF's electrical system. Manual or automatic reset of system protective devices, either by the Cooperative or the AES/QF Owner, is acceptable.

- D. The interconnection equipment must include an approved manual, visible load break safety switch lockable in the open position, and 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 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.
- 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 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 1547-2003, IEEE 929-2000, and UL 1741-2001. Adverse effect(s) and power quality issues include, but are not limited to, voltage regulation, flicker, and/or harmonics.
- F. The AES/QF Owner must inform the Cooperative of any changes to the AES/QF and obtain the Cooperative's approval, in writing, 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 his expense, all safety and interconnection equipment as specified by the Cooperative. Minimum required interconnection facilities are described in Section B hereto. The Cooperative reserves the right to observe and witness the installation and testing of interconnection facilities pursuant to industry practices, codes, and IEEE Standard 1547-2003, IEEE 929-2000, and UL 1741-2001.
- H. The AES/QF must be installed to meet the C2-2002 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.
- I. The Cooperative or Allegheny reserves the right to inspect the AES/QF and interconnection equipment at any time.
- J. The AES/QF Owner 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 electrical system. The policy must list the Cooperative and Allegheny as additional named insured. 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. In general, a minimum of \$1 Million in liability insurance is required. The specific amount will be based on the Cooperative's review of the specific AES/QF.
- K. 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.
- L. The AES/QF Owner shall sell electrical energy to Allegheny, pursuant to PURPA or ACT 213-2004 (as applicable) requirements, or upon

written notification to Allegheny, to another entity. 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.

- M. The AES/QF Owner is responsible for executing a contract with Allegheny to receive compensation for energy and/or capacity delivered into the Cooperative's electrical system. The Cooperative shall credit a AES at the full retail rate for each kilowatt-hour produced by a AES installed on the member's side of the electric revenue meter, up to a total amount of electricity used by the member during the billing period. For AESs 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's account equally at each meter's designated rate. At the end of each billing period, Allegheny shall compensate the AEGS 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. 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.
- N. For AES/QF's of 100 kW or less, the attached Rate Schedule applies (Section C).
- O. For AES/QF facilities of more than 100 kW, Allegheny will evaluate the proposed facility and negotiate potential purchase rates on a case-by-case basis, which rates will be based on Allegheny's avoided costs.
- P. Allegheny may refuse to purchase output from a 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.
- Q. Synchronous Generators will operate in the lagging VAR area of the capability curve at a power factor recommended by the Cooperative.

***BEDFORD RURAL ELECTRIC COOPERATIVE, INC.***

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

**SUPPLEMENT TO POLICY on  
ALTERNATE ENERGY PRODUCTION**

The ***BEDFORD RURAL ELECTRIC COOPERATIVE, INC.***, ("the Cooperative") has developed the ***POLICY on ALTERNATE ENERGY PRODUCTION*** enabling residential and commercial/industrial consumers to safely use electric power generated from non-traditional or renewable resources. Renewable resources, such as photovoltaics and fuel cells, may supplement the consumer's source of energy.

AES/QF Owners, as defined in the ***BEDFORD RURAL ELECTRIC COOPERATIVE, INC., POLICY on ALTERNATE ENERGY PRODUCTION***, can generate electricity for their own use, or for resale, within specific guidelines. AES/QF installations generally are non-utility sources of electric power that are connected to, and can supply power to, the cooperative-owned distribution or transmission system. The AES/QF can be non-consumer-owned, and can be powered either by renewable resources, or by non-renewable resources.

The Cooperative recognizes the various electric industry standards and safety codes as they pertain to Alternative Energy System (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), the Mid-Atlantic Distributed Resource Initiative (MADRI), PJM Interconnection, National Electric Safety Code (NESC), National Electric 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 then-current version of that document.

At a minimum, the Cooperatives require the use of AES/QF equipment that meets the intent of the IEEE 1547-2003, and/ or IEEE 929-2000, and/ or UL 1741-2001 Standards, and any other current industry standards.

## **GENERAL TECHNICAL REQUIREMENTS**

### **Overview**

The technical requirements for connection of AES/QF will be those necessary to assure the safety and integrity of the Cooperative's electric system, and to maintain the quality and reliability of service to the Cooperative's electrical system or to others connected thereto. If an adverse effect(s) occurs in the sole opinion of the Cooperative, the AES/QF Owner must discontinue operation and take corrective action.

### **Disconnecting Device**

The technical requirements require a lockable disconnecting device, installed at a Cooperative approved location, with an appropriate control and protective scheme that automatically isolates the AES/QF from the utility system for, but not necessarily limited to, the following conditions:

- An electrical or mechanical fault on the AES/QF.
- An electrical or mechanical fault on the Cooperative's electrical system.
- An abnormal operating voltage and/or frequency on either system.
- A separation of the Cooperative's main system from the circuit that is interconnected with the AES/QF.

The reconnection of the AES/QF to the Cooperative distribution system shall not occur until normal system conditions are present.

### **Installation**

The AES/QF units are to be installed in a workmanlike manner. Minimum Interconnection requirements will include, but may not be limited to, meeting or exceeding IEEE 1547-2003 and/ or UL 1741-2001 functionality requirements, or any other code or ordinance listed in this document. Facilities shall be installed to current NFPA 70-2005 codes or applicable electrical/ building codes. Additional operational or equipment requirements may be imposed on the AES/QF depending on the point of connection on the Cooperative's electrical facilities and the impact of the AES/QF on the Cooperatives' system. The Cooperative reserves the right to observe Generator start-up testing procedures to verify the proper system AES/QF interaction, or testing after modifications have been made to the Member's system.

### **Related Information**

Depending on the size of the AES/QF, guidelines established by the PJM Interconnection L.L.C. will need to be followed. The PJM website at [www.pjm.com](http://www.pjm.com) contains details on IEEE 1547-2003, and other interconnection information.

If the electrical output of the AES/QF will be transmitted over the electric system of another entity, the AES/QF may need to meet additional requirements of that entity.

### **Assumptions and Limitations**

IEEE 1547-2003 is not all-encompassing in its coverage of AES interconnections. Limitations and assumptions affecting its application include:

- The assumption that the AES/QF operates at 60 Hz.
- The assumption that the aggregate capacity of the AES is 10 MVA or less at the point of common connection.
- The assumption that IEEE 1547-2003 is focused on the activities of a AES on radial primary and secondary distribution systems.
- The limitation that IEEE 1547-2003 does not address the protection or operating requirements, planning, designing, or maintenance of the distribution system.

### **Monitoring Provisions / Other Communications / Control**

Depending on the intended use and application of the AES/QF, monitoring provisions may be needed. Small units providing supplemental residential power likely will not need monitoring, whereas larger units generating power in excess of local use may require additional metering, or the use of an indicator sent either to the Cooperative or another entity controlling the electric system. The communication capabilities required to coordinate the AES/QF with protective or monitoring devices, may include but not be limited to, a Remote Terminal Unit (RTU), and shall be installed at the AES/QF Owners expense.

Net Metering will require the use of metering equipment, located between the Cooperative's source and the Owner's electrical load, that will measure the flow of electricity from the Cooperative to the Owner. The metering will also measure the flow of electricity supplied by the AES/QF Owner to the Cooperative. These independent meter registers will be used to determine the amount of energy provided to the Cooperative, and will be the basis for potential monthly billing credits.

### **SPECIFIC TECHNICAL REQUIREMENTS – PROTECTION**

- A. Fault protection can be provided by various methods, but must be capable of detecting and clearing faults that can occur in AES/QF and/or Cooperative facilities. Typical schemes are shown in, but are not limited to, Exhibit 1.
- B. Isolation protection is required to immediately and automatically disconnect AES/QF generation from the Cooperative system upon the loss of Cooperative power.

This protection generally can be accomplished by either a synchronous inverter used in DC generation or by applying the following isolation relays:

1. Undervoltage relay which may be time-delayed and instantaneous overvoltage relay.
2. Underfrequency relay where generators equal to or greater than 100 kW are utilized.
3. Overfrequency relay on certain installations.

Typical protection schemes are illustrated in Figures 1 through 5 of Exhibit 1 for Qualifying Facilities of 100 kW or less. Requirements for Qualifying Facilities of greater than 100 kW will be developed on a case by case basis.

- C. AES/QF fault protection must coordinate with Cooperative system protective devices for faults in AES/QF equipment. The Cooperative will provide the characteristics of the protective device with which the AES/QF must coordinate. All required protection design and associated settings must be provided to and approved formally by the Cooperative prior to connecting AES/QF equipment to the Cooperative system. The following information must be supplied to the Cooperative:
1. One-line relay application diagram.
  2. Connection diagrams showing all external connections to individual components of the protective scheme.
  3. Instruction manuals for all protective components. Component specifications and internal wiring diagrams must be provided if not included in manuals.
  4. Generator data - equivalent impedances, time constants, etc. required to analyze fault contributions and load current flows.
  5. All protective equipment ratings.
- D. All relay settings for isolation protection must be coordinated and consistent with Cooperative equipment.
- E. Maintenance for required fault and isolation protection must be performed and documented by the AES/QF Owner at specified intervals and specifications established by the equipment manufacturer or at intervals otherwise acceptable to the Cooperative.
- F. A lockable, manually operable, visible load-break disconnecting device is required for all AES/QF interconnections. The device will be installed at a Cooperative-approved and accessible location.



- G. The AES/QF will contain or employ a disconnecting device to automatically isolate the AES/QF generation from the Cooperative system when the Cooperative's circuit is either partially energized or fully de-energized. The disconnecting device also must be blocked from closing in on a partially energized or a de-energized Cooperative circuit.
- H. The Cooperative has the right, as required, to inspect all required protective equipment associated with the AES/QF interconnection.
- I. The AES/QF is responsible for properly synchronizing the Facility's generation with the Cooperative system.
- J. The AES/QF is responsible for providing a phase protection device on three-phase generators that will prevent damage to the generator or the Cooperative's system or Cooperative Members' equipment due to the loss of energy in any phase of a poly-phase system.
- K. The AES/QF electrical system should be able to withstand any and all electrical transients that occur on Cooperative's electrical distribution and transmission systems, including but not limited to, voltage surges, sags, swells, and outages. For instance, fuse coordination and operation of Cooperative reclosers should not cause damage that would require repair of the AES/QF's electrical system. Manual or automatic reset of system protective devices, either by the Cooperative or the AES/QF Owner, is acceptable.
- L. It is acknowledged that AES/QF technologies, such as fuel cells and wood powered steam turbines, continue to evolve. While the latest industry standard may not be specifically listed in this document, the Cooperative expressly reserves the right to use the latest industry standards in the interconnection evaluation process for any AES/QF technology.
- M. Additional resources on protection systems:
- ANSI/IEEE Std 1001-1988 "IEEE Guide for Interfacing Dispersed Storage and Generation Facilities with Electric Power Systems."
  - PJM "Small Generator (2 MW or less) Technical Requirements and Standards."
  - NFPA 70-2005 National Electric Code. *Note: Attention is directed to Article 250 – Grounding and Bonding.*
  - IEEE Green Book – ANSI C114.1-1973/IEEE Std 142-1972 "IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems."

- IEEE Orange Book – ANSI/IEEE Std 446-1980 "IEEE Recommended Practice for Emergency and Standby Power Systems for Industrial and Commercial Applications."

### **PROJECT REVIEW**

Additionally, to ensure that 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 should reveal potential problems prior to the operation of the AES/QF, as well as provide a cost estimate for the necessary work to accept AES/QF generation. Any cost of studies associated with the proposed installation of a AES/QF shall be borne by the AES/QF Owner.

The Cooperative, however, 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**

It shall be the responsibility of the AES/QF Owner to design and operate a system adequate to meet the technical requirements generally set forth above and to assure reliability of the protection scheme as predicated by the design and location of Member generation. In addition, this protection must be compatible with Cooperative 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 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

**SAFETY & INTERCONNECTION REQUIREMENTS FOR QUALIFYING FACILITIES (QF) / DISTRIBUTED RESOURCES (DR) DOCUMENT**

**SUPPLEMENT TO POLICY FOR COGENERATION & SMALL POWER PRODUCTION**

The Cooperatives have developed the *POLICY FOR COGENERATION & SMALL POWER PRODUCTION* enabling residential and commercial/industrial consumers to safely use electric power generated from non-traditional or renewable resources. Renewable resources, such as photovoltaics and fuel cells, may supplement the consumer's source of energy.

QF/DR Owners, as defined in the *POLICY FOR COGENERATION AND SMALL POWER PRODUCTION*, can generate electricity for their own use, or for resale, within specific guidelines. QF/DR installations are generally a non-utility source of electric power that are connected to, and can supply power to, the cooperative owned distribution or transmission system. The QF/DR can be non-consumer owned, and can be powered either by renewable resources, or by non-renewable resources.

The Cooperatives recognize the various electric industry standards and safety codes as they pertain to Qualifying Facilities (QF) or Distributed Resources (DR). The standards and codes include, but are not limited to: Institute of Electronic and Electrical Engineers (IEEE), the Mid-Atlantic Distributed Resource Initiative (MADRI), PJM Interconnection, National Electric Safety Code (NESC), National Electric Code (NEC), Underwriters Laboratories (UL), state, and local entities.

At a minimum, the Cooperatives require the use of QF/DR equipment that meets the intent of the IEEE 1547, and/ or IEEE 929-2000, and/ or UL 1741 Standards, and any other current industry standards.

## **GENERAL TECHNICAL REQUIREMENTS**

### Overview

The technical requirements for connection of QF/DR will be those necessary to assure the safety and integrity of the Cooperative's electric system, and to maintain the quality and reliability of service to the Cooperative's electrical system or to others connected thereto. Should adverse effect(s) occur, the QF/DR Owner must discontinue operation and take corrective action.

### Disconnecting Device

The technical requirements require a disconnecting device with an appropriate control and protective scheme, which automatically isolates the QF/DR from the utility system for, but not necessarily limited to, the following conditions:

- An electrical or mechanical fault on the QF/DR.
- An electrical or mechanical fault on the Cooperative's electrical system.
- An abnormal operating voltage and/or frequency on either system.
- A separation of the Cooperative's main system from the circuit, which is interconnected with the QF/DR.

The reconnection of the QF/DR to the Cooperative distribution system shall not occur until normal system conditions are present.

### Installation

The QF/DR units are to be installed in a workmanlike manner. Minimum Interconnection requirements will include, but may not be limited to, meeting or exceeding IEEE 1547 and/ or UL 1741 functionality requirements. Facilities shall be installed to NEC codes or applicable electrical/ building codes.

Additional operational or equipment requirements may be imposed on the QF/DR depending on the point of connection on the Cooperative's electrical facilities and the impact of the QF/DR on the Cooperatives' system.

The Cooperative reserves the right to observe Generator start-up testing procedures to verify the proper system QF/DR interaction, or testing after modifications have been made to the Member's system.

### Related Information

Depending on the size of the QF/DR, guidelines established by the PJM Interconnection L.L.C. will need to be followed. The PJM website at [www.pjm.com](http://www.pjm.com) can be searched for details on IEEE 1547, and other interconnection information. If the electrical output of the QF/DR is to be transmitted over the electric system of another entity, the QF/DR may need to meet additional requirements of that entity.

## Assumptions and Limitations

It is known that IEEE 1547 is not all-encompassing its coverage of DR interconnections. These assumptions and limitations include:

- The assumption that the QF/DR operates at 60 Hz;
- The assumption that the aggregate capacity of the DR is 10 MVA or less at the point of common connection;
- The assumption that IEEE 1547 is focused on the activities of a DR on radial primary and secondary distribution systems
- The limitation that IEEE 1547 does not address the protection or operating requirements, planning, designing, or maintaining the distribution system
- The limitation that IEEE 1547 does not apply to certain transfer schemes where load is transferred between the DR and radial distribution system feeders for momentary periods less than 100 ms

## Monitoring Provisions / Other Communications / Control

Depending on the intended use and application of the QF/DR, monitoring provisions may be needed. Small units providing supplemental residential power likely will not need monitoring, whereas larger units generating power in excess of local use may require additional metering, or the use of an indicator sent either to the Cooperative or other entity controlling the electric system. Other communication capabilities may be needed for the coordination of protective or other devices that may be required.

## **SPECIFIC TECHNICAL REQUIREMENTS – PROTECTION**

- A. Fault protection can be provided by various methods, but must be capable of detecting and clearing faults that can occur in QF/DR and Cooperative facilities. Typical schemes are shown in Exhibit 1.
- B. Isolation protection is required to immediately and automatically disconnect QF/DR generation from the Cooperative system upon the loss of Cooperative power.

This protection generally can be accomplished by either a synchronous inverter used in DC generation or by applying the following isolation relays:

1. Undervoltage relay which may be time-delayed and instantaneous overvoltage relay.
2. Underfrequency relay where generators equal to or greater than 100 kW are utilized.
3. Overfrequency relay on certain installations.

Typical protection is illustrated in Figures 1 through 8 of Exhibit 1 for Qualifying Facilities of 100 kW or less. Requirement for Qualifying Facilities of greater than 100 kW will be developed on a case by case basis.

- C. QF/DR fault protection must coordinate with Cooperative system protective devices for faults in QF/DR equipment. The Cooperative will provide the characteristics of the protective device that the QF/DR must coordinate with.

All required protection design and associated settings must be provided to and approved formally by the Cooperative prior to connecting QF/DR equipment to the Cooperative system. The following information must be supplied to the Cooperative:

1. One-line relay application diagram.
  2. Connection diagrams showing all external connections to individual components of the protective scheme.
  3. Instruction manuals for all protective components. Component specifications and internal wiring diagrams must be provided if not included in manuals.
  4. Generator data - equivalent impedances, time constants, etc. required to analyze fault contributions and load current flows.
  5. All protective equipment ratings.
- D. All relay settings for isolation protection will be coordinated with Cooperative equipment.
- E. Maintenance for required fault and Isolation protection must be performed and documented by the QF/DR Owner at specified intervals and to specifications established by the manufacturer of the equipment.
- F. A Cooperative controlled load-break disconnecting device is required on all QF/DR owned generation interties.
- G. The QF/DR's disconnecting device used to isolate QF/DR generation from the Cooperative system must be blocked from closing in on a de-energized Cooperative circuit.
- H. The Cooperative has the right, as required, to inspect all required protective equipment associated with the QF/DR intertie.
- I. The QF/DR is responsible for properly synchronizing his generation with the Cooperative system.
- J. The QF/DR is responsible for providing a phase protection device on three-phase generators so as to prevent damage to the generator or

the Cooperative's system or Cooperative Members' equipment due to the loss of energy in one phase of a poly phase system.

- K. It is acknowledged that QF/DR technologies, such as fuel cells and wood powered steam turbines, continue to evolve. While the latest industry standard may not be specifically listed in this document, the Cooperative reserves the right to use the latest industry standards in the interconnection evaluation process.
- L. Additional resources on protection systems
- ANSI / IEEE Std 1001-1988 "IEEE Guide for Interfacing Dispersed Storage and Generation Facilities with Electric Power Systems"
  - PJM "Small Generator (2 MW or less) Technical Requirements and Standards"
  - NFPA 70 National Electric Code *Note: Attention is directed to Article 250 – Grounding and Bonding*
  - IEEE Green Book – ANSI C114.1-1973 / IEEE Std 142-1972 "IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems"
  - IEEE Orange Book – ANSI / IEEE Std 446-1980 "IEEE Recommended Practice for Emergency and Standby Power Systems for Industrial and Commercial Applications"

## **PROJECT REVIEW**

Additionally, to ensure that other Cooperative Members' electric service is not negatively impacted by one (or more) operating QF/DR units, a technical review will be performed by the Cooperative. The review process should reveal potential problems prior to the operation of the QF/DR, as well as provide a cost estimate for the necessary work to accept QF/DR generation.

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

## **RESPONSIBILITY**

It shall be the responsibility of the QF/DR Owner to design and operate a system adequate to meet the technical requirements generally set forth above and to assure reliability of the protection scheme as predicated by the design and location of Member generation. In addition, this protection must be compatible with Cooperative system protective devices. Paralleling



Member generation with the Cooperative system will be permitted only upon obtaining formal Cooperative approval in advance.

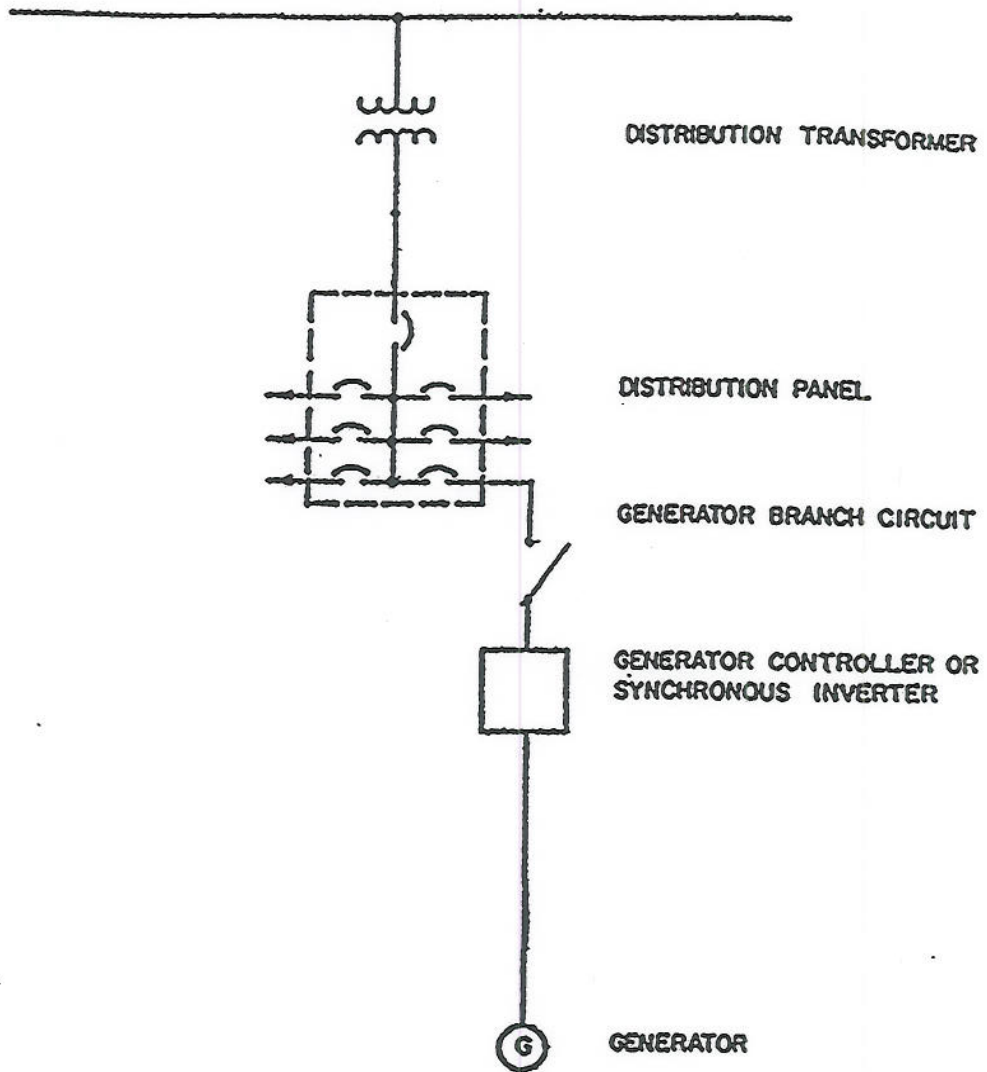
The QF/DR Owner is solely responsible for providing adequate protection for his equipment.

# EXHIBIT 1

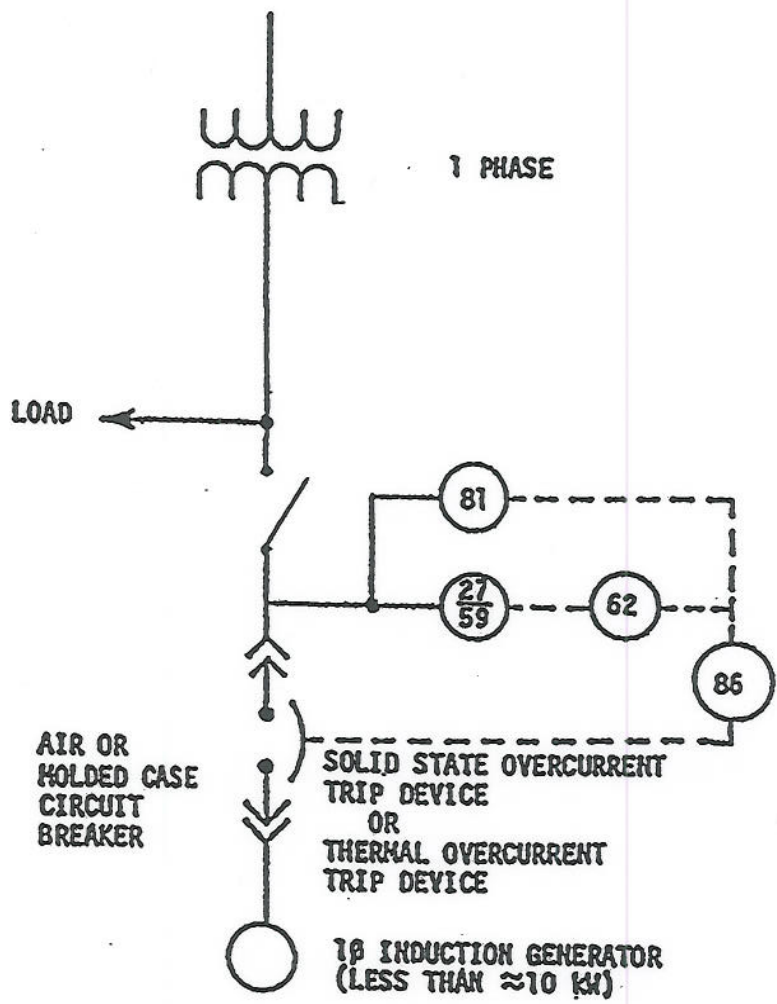
## GENERAL PROTECTION REQUIREMENTS

### Figure

- 1 Protection for very small single-phase generator (generally 5 kW or less) used as a stand-by source of power during power outages or other interruptions. It NEVER can provide power to the electric cooperative. This situation requires the equipment to have automatic voltage sensing and switching equipment to prevent ANY power back-feed onto the cooperative electric system.
- 2 Protection for small single-phase induction generator using a low voltage circuit breaker
- 3 Protection for small single-phase induction generator using a fused contactor[ do not in
- 4 Protection for small three-phase induction generator using a low voltage circuit breaker
- 5 Protection for small three-phase induction generator using a fused contactor
- 6 Protection for small three-phase synchronous generator
- 7 Protection for small single-phase line or force-commutated inverter
- 8 Protection for small three-phase line or force-commutated inverter

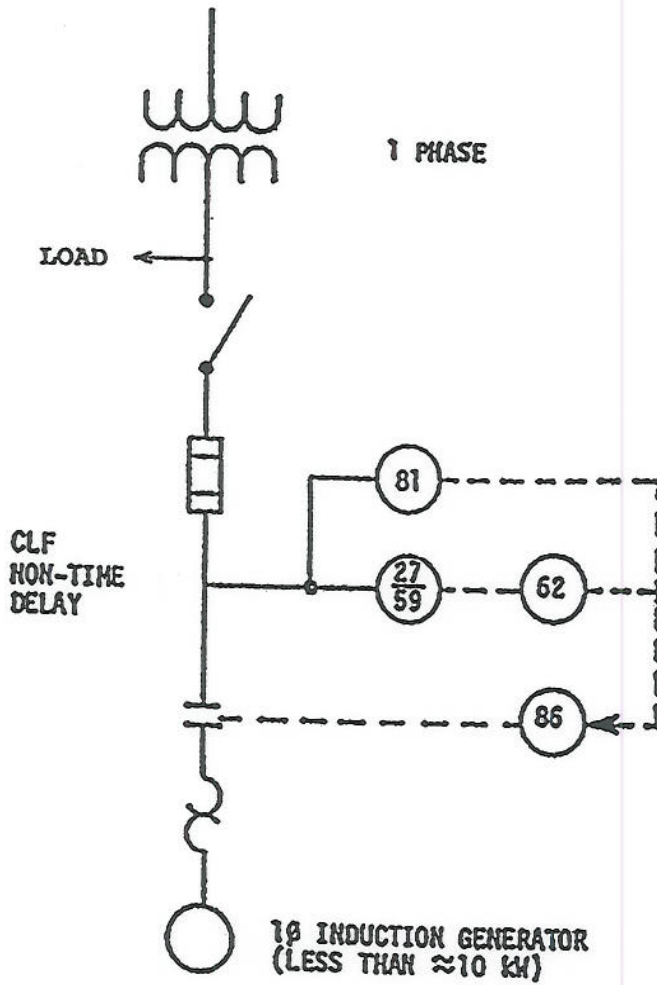


**FIGURE 1 PROTECTION FOR SMALL SINGLE-PHASE GENERATOR. GENERALLY 5 KW OR LESS**



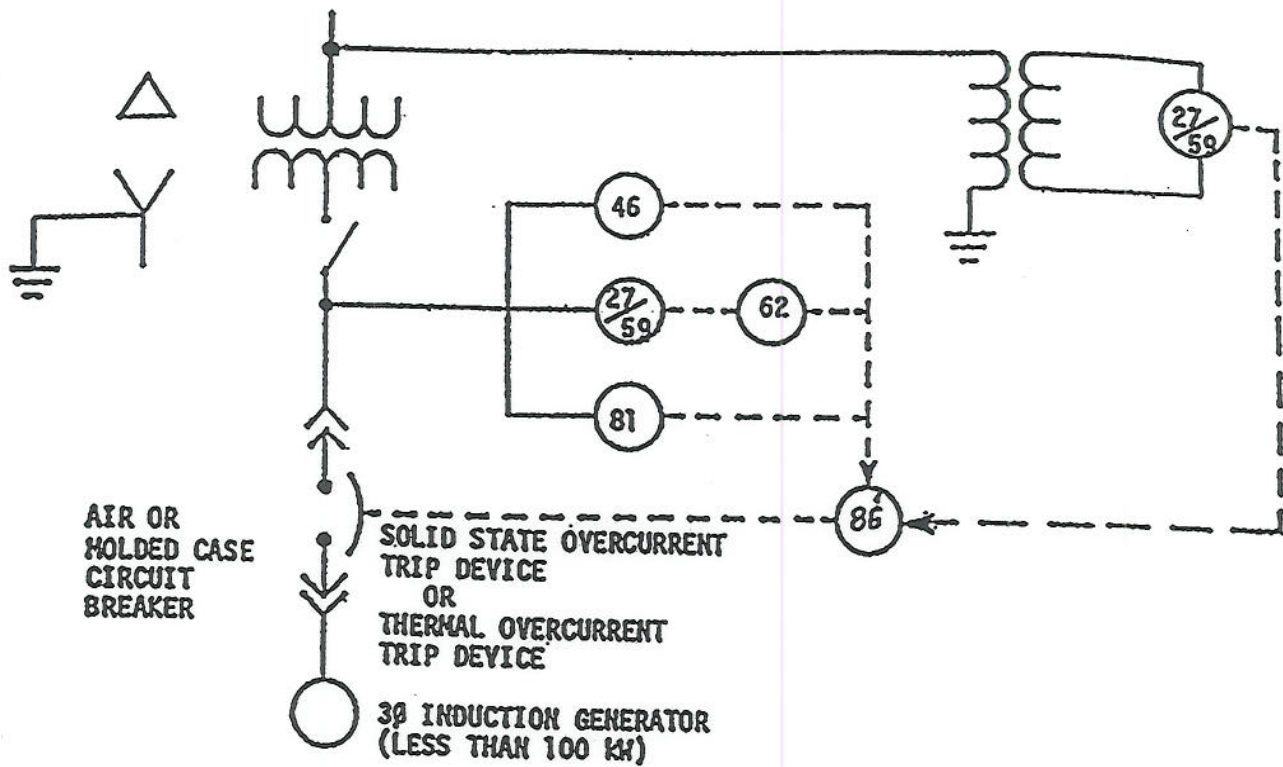
<u>DEVICE</u>	<u>FUNCTION</u>
81	OVER/UNDER FREQUENCY OR RATE OF FREQUENCY CHANGE
27/59	UNDER/OVER VOLTAGE
62	TIMING DEVICE
86	TRIP LOCK-OUT DEVICE

FIGURE 2 PROTECTION FOR SMALL SINGLE-PHASE INDUCTION GENERATOR, USING A LOW-VOLTAGE CIRCUIT BREAKER



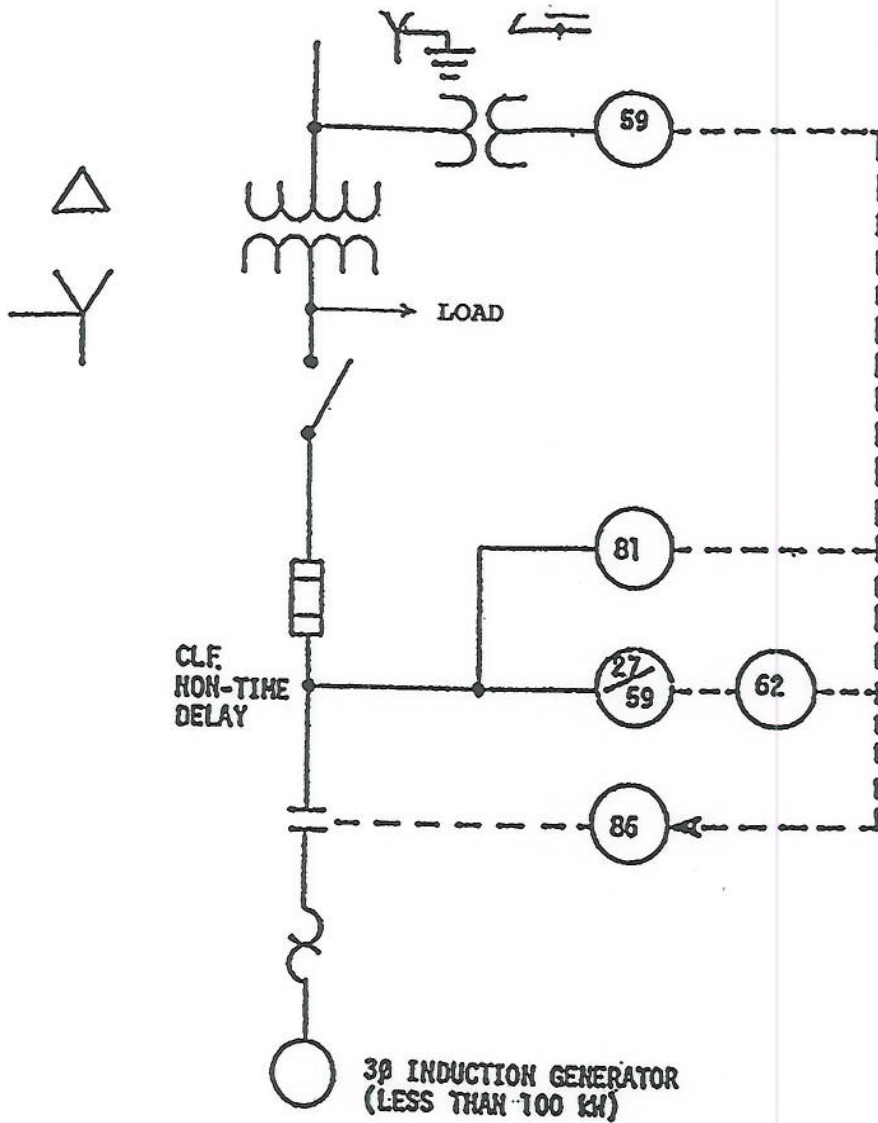
<u>DEVICE</u>	<u>FUNCTION</u>
81	OVER/UNDER FREQUENCY OR RATE OF FREQUENCY CHANGE
27/59	UNDER/OVER VOLTAGE
62	TIMING DEVICE
85	TRIP LOCK-OUT DEVICE

FIGURE 3 PROTECTION FOR SMALL SINGLE-PHASE  
INDUCTION GENERATOR USING A FUSED CONTACTOR



<u>DEVICE</u>	<u>FUNCTION</u>
81	OVER/UNDER FREQUENCY OR RATE OF FREQUENCY CHANGE
27/59	UNDER/OVER VOLTAGE
62	TIMING DEVICE
46	NEGATIVE SEQUENCE VOLTAGE
86	TRIP LOCK-OUT DEVICE

FIGURE 4 PROTECTION FOR SMALL THREE-PHASE INDUCTION GENERATOR  
USING A LOW-VOLTAGE CIRCUIT BREAKER



<u>DEVICE</u>	<u>FUNCTION</u>
81	OVER/UNDER FREQUENCY OR RATE OF FREQUENCY CHANGE
27/59	UNDER/OVER VOLTAGE
62	TIMING DEVICE
86	TRIP LOCK-OUT DEVICE
59	OVERVOLTAGE

FIGURE 5 PROTECTION FOR SMALL THREE-PHASE INDUCTION GENERATOR USING A FUSED CONTACTOR

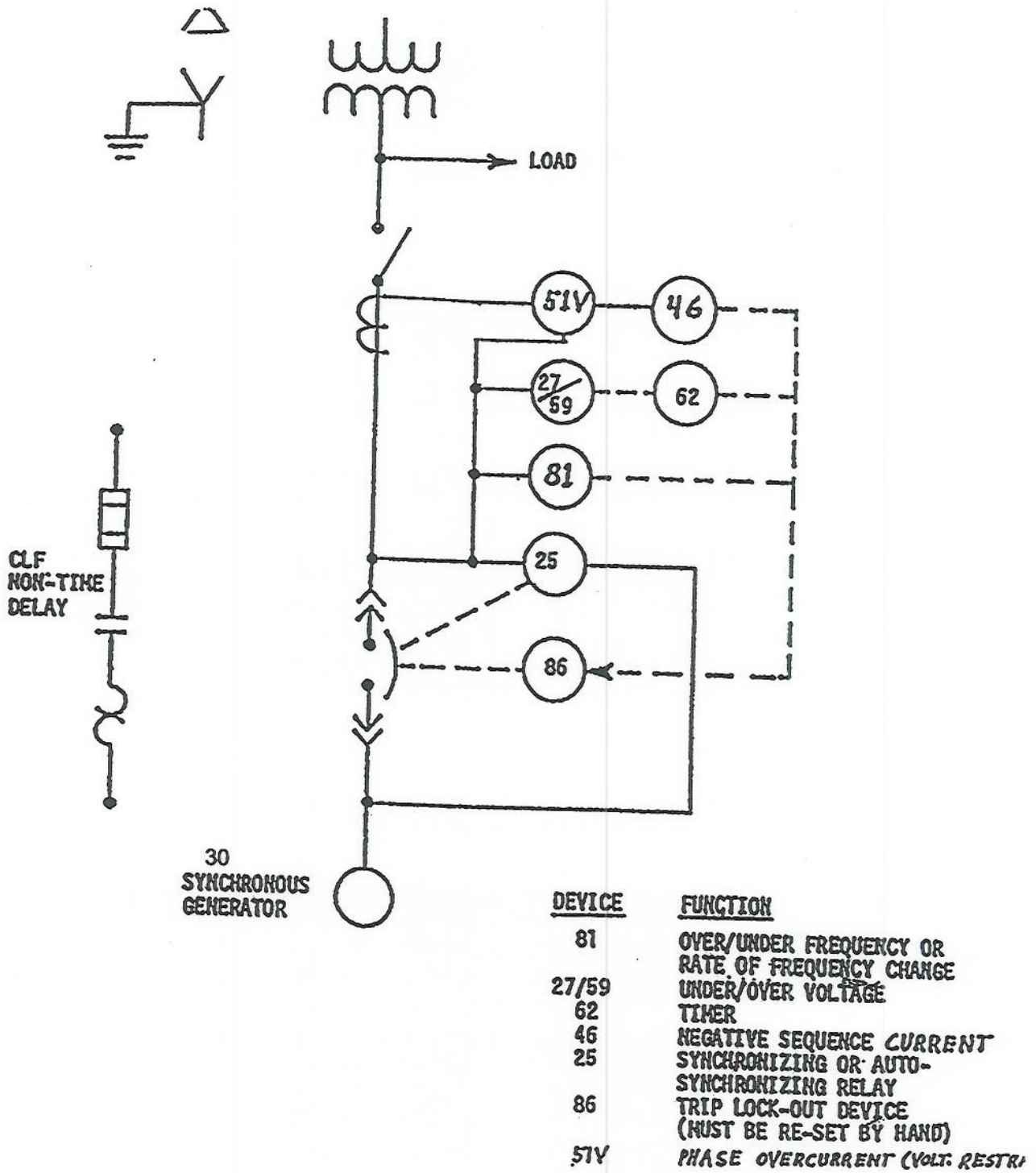


FIGURE 6 PROTECTION FOR SMALL SYNCHRONOUS GENERATOR



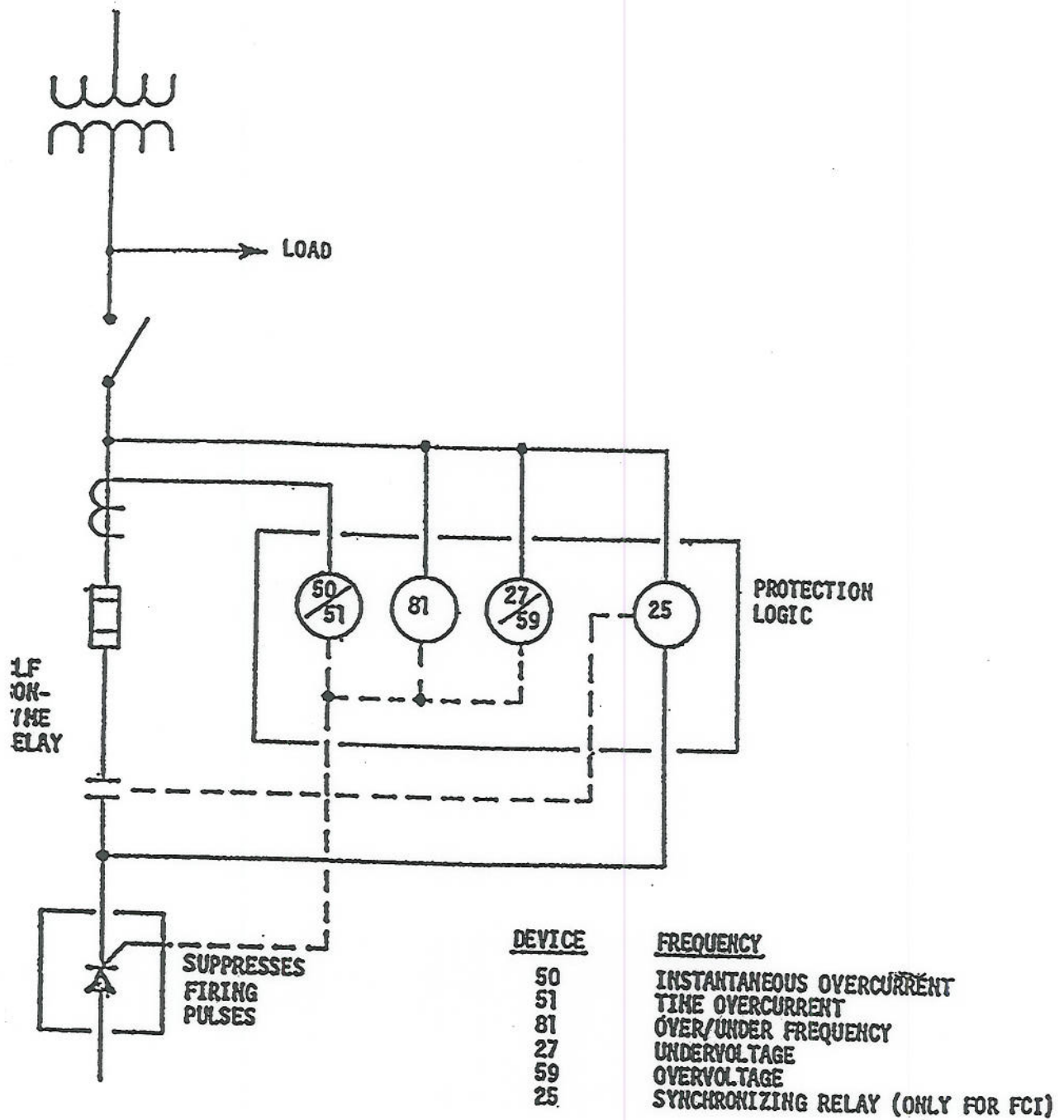


FIGURE 7 PROTECTION FOR SINGLE-PHASE LINE OR FORCE-COMMUTATED INVERTER

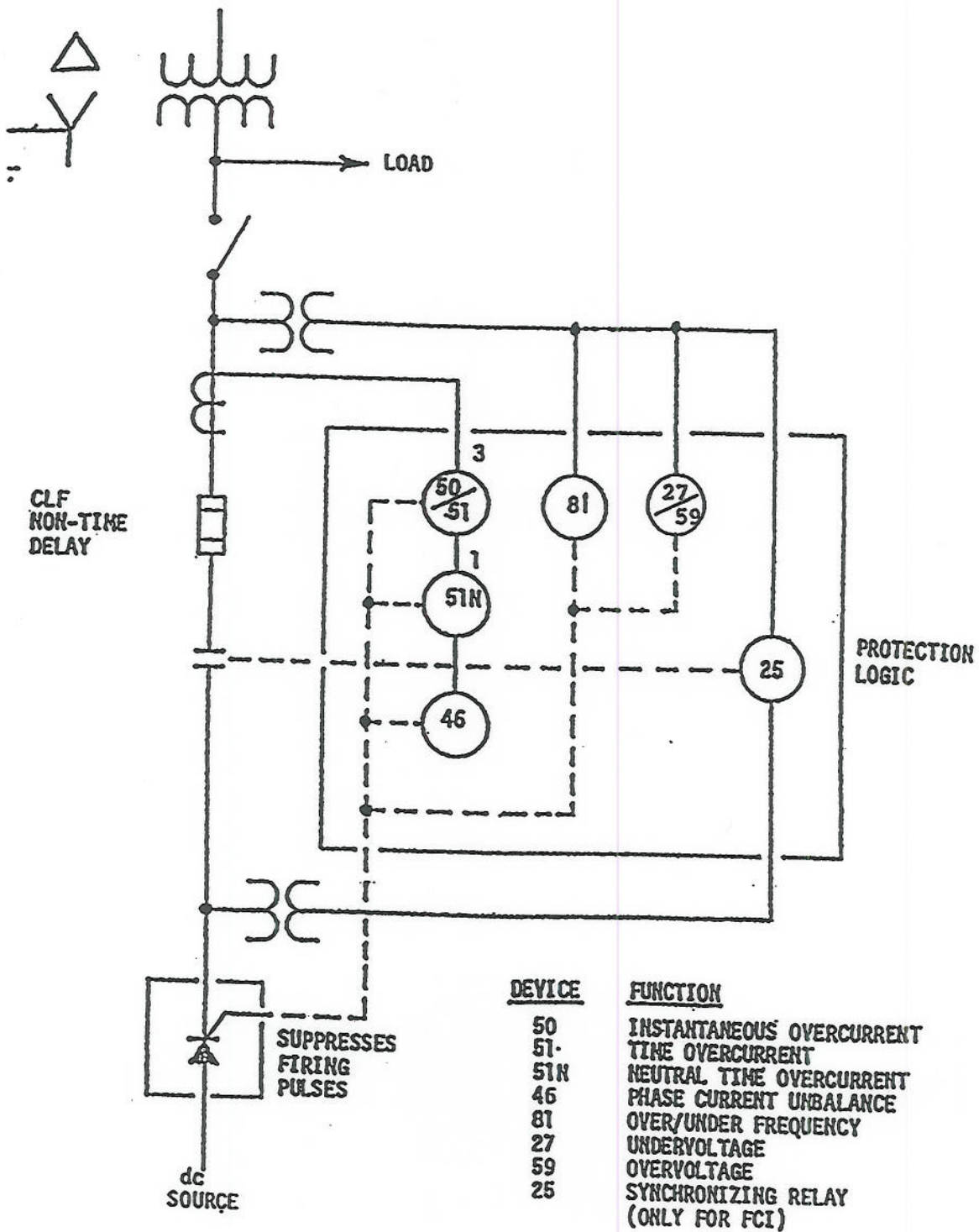
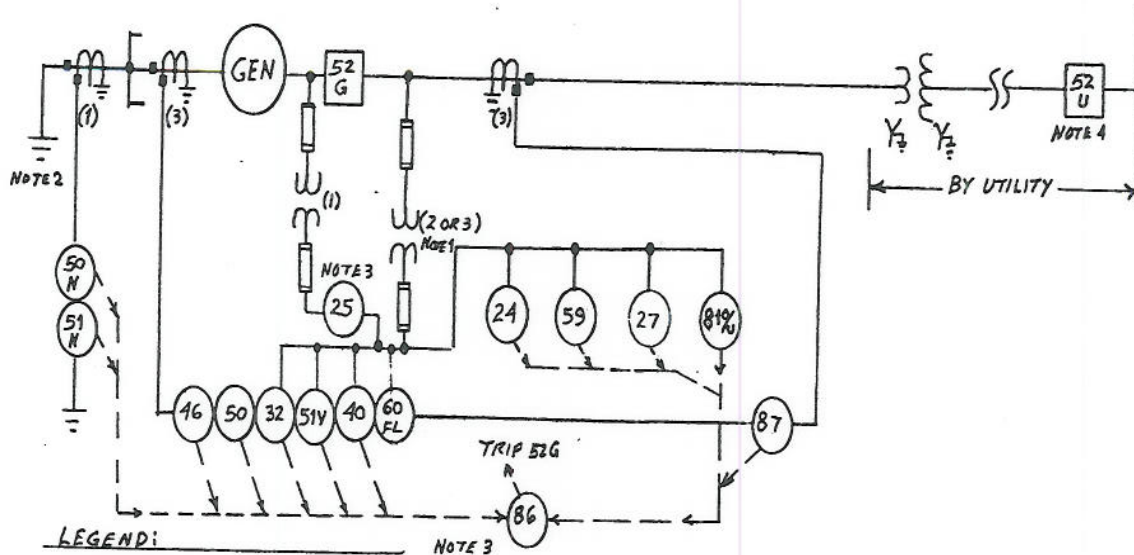


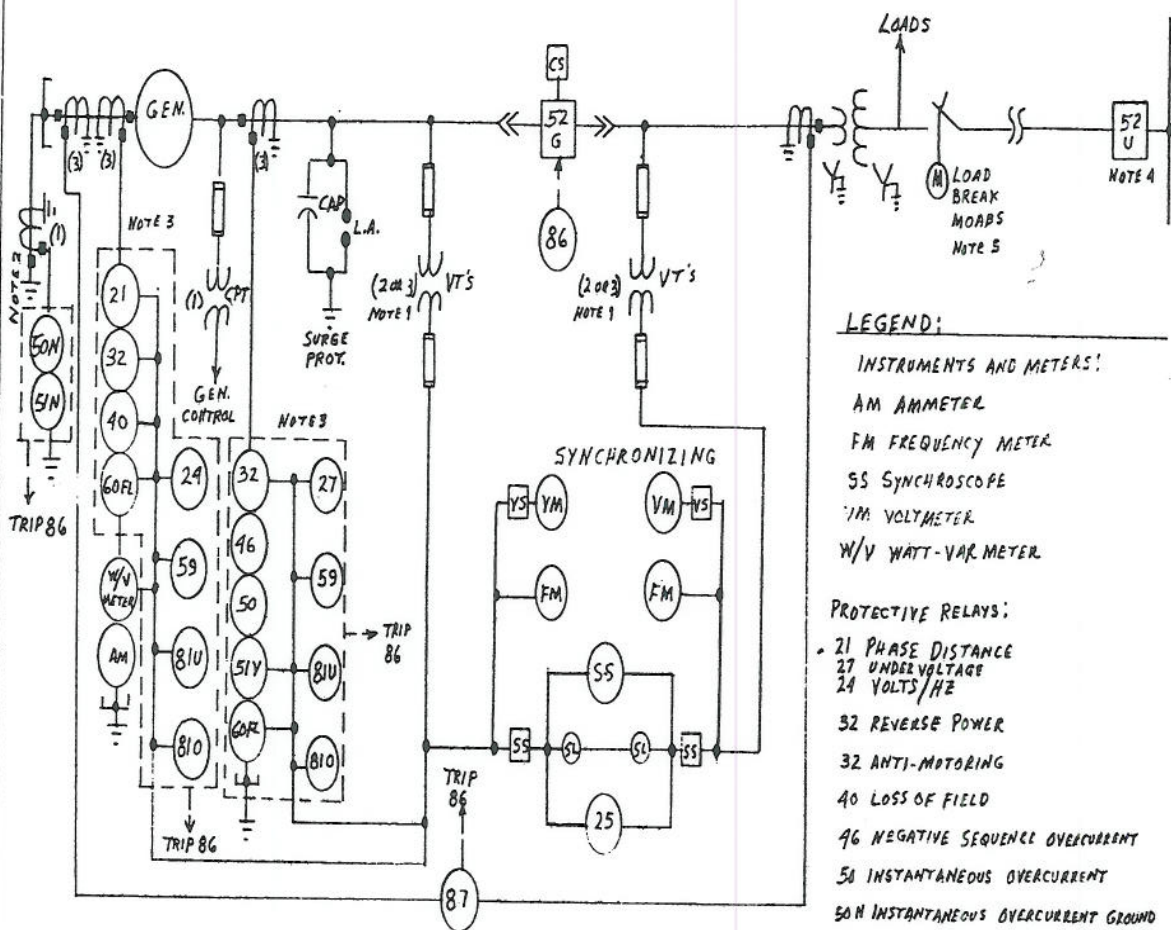
FIGURE 8 PROTECTION FOR THREE-PHASE SMALL LINE OR FORCE-COMMUTATED (FCI) INVERTER



- LEGEND:**
- PROTECTIVE RELAYS:**
- 24 VOLTS/HZ
  - 27 UNDERVOLTAGE
  - 32 REVERSE POWER (ANTI-MOTORKING)
  - 40 LOSS OF FIELD
  - 46 NEGATIVE SEQUENCE OVERCURRENT
  - 50 INSTANTANEOUS OVERCURRENT
  - 50N INSTANTANEOUS OVERCURRENT GROUND
  - 51N TIME OVERCURRENT GROUND
  - 51V VOLTAGE CONTROLLED TIME OVERCURRENT
  - 59 OVERVOLTAGE
  - 60FL FUSE LOSS DETECTION
  - 81% OVER/UNDERFREQUENCY
  - 86 LOCKOUT RELAY
  - 87 DIFFERENTIAL RELAY
- CONTROL RELAYS:**
- 25 AUTOMATIC SYNCHRONIZER OR SYNC-CHECK RELAY

- NOTES:**
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.
  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 RECLOSING CIRCUIT BREAKER, RECLOSING SHOULD BE SUPERVISED BY A SYNC-CHECK RELAY (DEVICE 25).

TYPICAL EXAMPLE OF PROTECTION SCHEME FOR SMALL SYNCHRONOUS GENERATOR



**LEGEND:**

**INSTRUMENTS AND METERS:**

- AM AMMETER
- FM FREQUENCY METER
- SS SYNCHROSCOPE
- VM VOLTMETER
- W/V WATT-VAR METER

**PROTECTIVE RELAYS:**

- 21 PHASE DISTANCE
- 27 UNDERVOLTAGE
- 24 VOLTS/Hz
- 32 REVERSE POWER
- 32 ANTI-MOTORING
- 40 LOSS OF FIELD
- 46 NEGATIVE SEQUENCE OVERCURRENT
- 50 INSTANTANEOUS OVERCURRENT
- 50N INSTANTANEOUS OVERCURRENT GROUND
- 51N TIME OVERCURRENT GROUND
- 51V TIME OVERCURRENT - VOLTAGE CONTROLLED
- 59 OVERVOLTAGE
- 60FL FUSE LOSS DETECTION
- 81O OVERFREQUENCY
- 81V UNDERFREQUENCY
- 86 LOCKOUT RELAY
- 87 DIFFERENTIAL RELAY

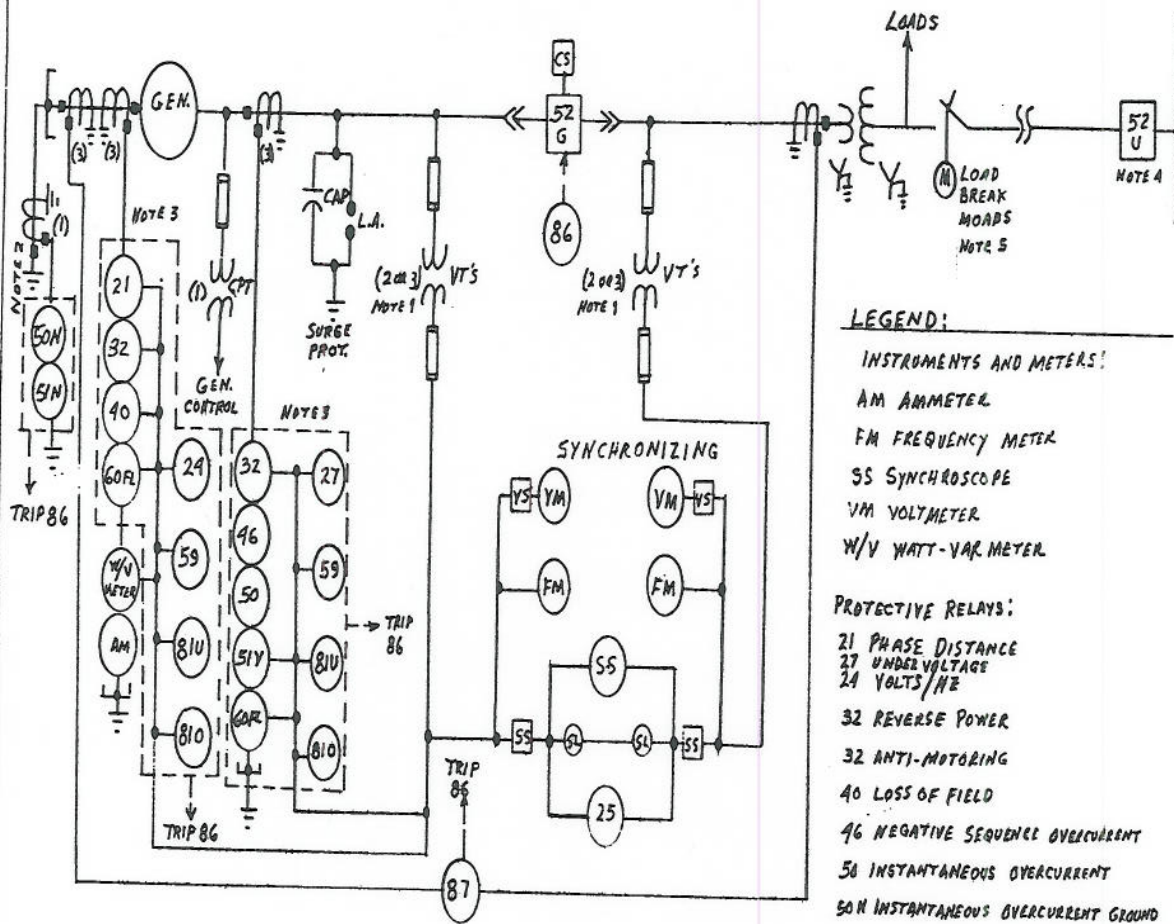
**CONTROL DEVICES:**

- 25 SYNC-CHECK / AUTOMATIC SYNCHRONIZER
- CS CIRCUIT BREAKER CONTROL SWITCH
- SS SYNCHRONIZING SWITCH
- VS VOLTMETER SWITCH

**NOTES:**

1. VT'S CAN BE CONNECTED WYE OR OPEN DELTA.
2. GENERATOR GROUNDING IS SHOWN AS LOW IMPEDANCE, HIGH IMPEDANCE CAN BE USED IF DESIRED.
3. PROTECTIVE RELAYING DEVICES SHOWN ARE FUNCTIONS OF TWO MULTI-FUNCTION PACKAGES, ONE FOR GENERATOR PROTECTION AND THE OTHER FOR UTILITY INTERFACE PROTECTION. RELAYS 25, 86 AND 87 ARE SEPARATE DEVICES.
4. IF CIRCUIT BREAKER 52U HAS RECLOSEING CAPABILITY, RECLOSEING SHOULD BE SUPERVISED WITH A SYNC-CHECK RELAY.
5. IF THE GENERATOR IS TO BE USED IN A STANDBY MODE, A MOTOR-OPERATED LOAD BREAK SWITCH OR CIRCUIT BREAKER MUST BE USED TO ISOLATE THE UTILITY. IF A CIRCUIT BREAKER IS USED, SYNCHRONIZING CAN BE ACCOMPLISHED ACROSS THE BREAKER. IF A MOABS IS USED IT MUST BE INTERLOCKED SO IT CANNOT BE CLOSED WITH THE GENERATOR ON LINE UPON UTILITY RESTORATION.

**TYPICAL EXAMPLE OF PROTECTION SCHEME FOR LARGE SYNCHRONOUS GENERATOR**



**LEGEND:**

**INSTRUMENTS AND METERS:**

- AM AMMETER
- FM FREQUENCY METER
- SS SYNCHROSCOPE
- VM VOLTMETER
- W/V WATT-VAR. METER

**PROTECTIVE RELAYS:**

- 21 PHASE DISTANCE
- 27 UNDERVOLTAGE
- 24 VOLTS/Hz
- 32 REVERSE POWER
- 32 ANTI-MOTORING
- 40 LOSS OF FIELD
- 46 NEGATIVE SEQUENCE OVERCURRENT
- 50 INSTANTANEOUS OVERCURRENT
- 50N INSTANTANEOUS OVERCURRENT GROUND
- 51N TIME OVERCURRENT GROUND
- 51V TIME OVERCURRENT-VOLTAGE CONTROLLED
- 59 OVERVOLTAGE
- 60FL FUSE LOSS DETECTION
- 810 OVERFREQUENCY
- 81U UNDERFREQUENCY
- 86 LOCKOUT RELAY
- 87 DIFFERENTIAL RELAY

**CONTROL DEVICES:**

- 25 SYNC-CHECK OR AUTOMATIC SYNCHRONIZER
- CS CIRCUIT BREAKER CONTROL SWITCH
- SS SYNCHRONIZING SWITCH
- YS VOLTMETER SWITCH

**NOTES:**

1. VT'S CAN BE CONNECTED WYE OR OPEN DELTA.
2. GENERATOR GROUNDING IS SHOWN AS LOW IMPEDANCE, HIGH IMPEDANCE CAN BE USED IF DESIRED.
3. PROTECTIVE RELAYING DEVICES SHOWN ARE FUNCTIONS OF TWO MULTI-FUNCTION PACKAGES, ONE FOR GENERATOR PROTECTION AND THE OTHER FOR UTILITY INTERFACE PROTECTION. RELAYS 25, 86 AND 87 ARE SEPARATE DEVICES.
4. IF CIRCUIT BREAKER 52U HAS RECLOSING CAPABILITY, RECLOSING SHOULD BE SUPERVISED WITH A SYNC-CHECK RELAY.
5. IF THE GENERATOR IS TO BE USED IN A STANDBY MODE A MOTOR-OPERATED LOAD BREAK SWITCH OR CIRCUIT BREAKER, MUST BE USED TO ISOLATE THE UTILITY. IF A CIRCUIT BREAKER IS USED, SYNCHRONIZING CAN BE ACCOMPLISHED ACROSS THE BREAKER. IF A MOADS IS USED IT MUST BE INTERLOCKED SO IT CANNOT BE CLOSED WITH THE GENERATOR ON LINE UPON UTILITY RESTORATION.

TYPICAL EXAMPLE OF PROTECTION SCHEME FOR LARGE SYNCHRONOUS GENERATOR

**ALLEGHENY ELECTRIC COOPERATIVE, INC.**  
**EXHIBIT C – Rate Schedule SPP – Small Power Purchases**  
**Effective - January 1, 2009**

**AVAILABILITY:**

Available to any and all Alternative Energy Systems (AES) as defined by the Pennsylvania Alternative Energy Portfolio Standards Act of 2004 (Act 213) and Qualifying Facilities (QF) as defined under Section 201 of the Public Utility Regulatory Policies Act of 1978, as amended, which receive electric service under existing retail tariffs from any of Allegheny Electric Cooperative, Inc.'s (Allegheny) 14 member distribution cooperatives (Members) located throughout Pennsylvania and New Jersey. The installed capacity of such AESs/QFs is generally not to exceed 500 kW unless provided for otherwise in this Rate Schedule SPP.

**PROVISIONS:**

- A. In compliance with Section 210 of the Public Utility Regulatory Policies Act of 1978, as amended (PURPA), Allegheny will purchase: (1) at avoided cost, all excess energy (kWh) generated by an AES/QF which is not directly consumed by that AES/QF; or (2) as an alternative, the entire capacity and/or energy output of such AES/QF during any predetermined period at a mutually agreeable negotiated price; or (3) transmit the output of the AES/QF across its and/or its Members' systems for purchase by third parties. The AES/QF will be required to install metering equipment, satisfactory to Allegheny, to demonstrate the amount of generation the AES/QF provided to Allegheny. In the event of a purchase by Allegheny, any capacity and/or energy purchased will serve to offset similar purchases from Allegheny's existing wholesale power supplier(s) and this additional capacity and/or energy will be deemed used and useful by the Member to whose system it is delivered.
- B. At the option of the AES/QF, Allegheny will also purchase at avoided cost, firm, controllable generating capacity (kW) under this Rate Schedule, but only if the AES/QF can demonstrate or otherwise financially guarantee that such capacity will be or was available during: (1) the highest one-hour Penelec load peak in one or more months of the current year; and/or (2) the five (5) peak days/hours of PJM during the summer season of the previous year (5 CPs). Currently, the summer season is June 1 through September 30. To elect compensation under this option, the AES/QF will be required to install metering equipment, satisfactory to Allegheny, to demonstrate the amount of generation the AES/QF provided to Allegheny during the current year's monthly Penelec monthly load peaks and/or during the 5 CPs of the previous year by virtue of operating the AES/QF during those times. If this option is requested, the AES/QF will be required to compensate Allegheny for any and all costs associated with the equipment necessary to determine the expected availability, timing (controllability) and magnitude of the furnished generation. The avoided cost for providing generation to Allegheny during such Penelec current year's monthly load peaks and/or 5 CPs of the previous year's summer season is outlined in Sections F, G, H and I.

- C. At times when an AES/QF must purchase capacity, transmission, and associated energy from a Member to supply its electrical requirements, all such retail transactions will be conducted between the AES/QF and the Member to whose system it is interconnected.
- D. Allegheny recognizes that it is in the best interest of its Members and the AES/QF that the Member determines all technical requirements and specifications which govern the connection of an AES/QF with its system. These technical requirements for interconnection are designed to assure the integrity and safe operation of the interconnected system while maintaining the quality and reliability of service to all consumer-members of the Member.
- E. The avoided cost to Allegheny for capacity, transmission and energy provided by an AES/QF or in the alternative, the mutually agreed upon value of such products for longer term, firm supply arrangements, will be dependent upon and determined by, but not limited to, the following kinds of factors:
1. The specific times of the day, month and year that the AES/QF operates and the level at which it operates.
  2. Allegheny's need for and price of capacity and energy during the times of the AES/QF operation.
  3. The specific Member delivery point to which the AES/QF is connected and its voltage.
  4. Allegheny's specific power supply and transmission arrangements, including rate structure, for supplying the delivery point to which the AES/QF is connected.
- F. Capacity Payment: The annual payment for capacity will be equal to the product of: (1) the average generation provided to Allegheny by the AES/QF during the PJM 5 hours CPs during the previous calendar year's summer season as measured on the AES/QF meter required pursuant to Provision B of this Schedule SPP; and (2) the weighted cost of capacity purchased from PJM or third parties by Allegheny to meet its Capacity Obligation to PJM for that month.
- G. Transmission Payment: The monthly Transmission Payment will be equal to the product of: (1) the generation provided to Allegheny by the AES/QF, as measured on the AES/QF meter as required pursuant to Provision B of this Rate Schedule SPP; (a) during the Penelec monthly load peak if the AES/QF is located in the Penelec, Met-Ed or Jersey Central transmission zones of PJM; or (b) the Allegheny Power or PPL annual peak for those respective zones during the period November 1 through October 31 of the previous year; and (2) (a) the rates paid for transmission service under the Wheeling and Supplemental Power (WASP) Agreement in transmission zones covered by the WASP Agreement; or (b) the PJM Open Access Transmission Tariff for the Allegheny Power and PPL zones respectively.
- H. Energy Payment: The payment for energy will be equal to the product of: (1) the actual AES/QF energy delivered to Allegheny, as measured on the AES/QF meter required pursuant to Provisions A of this Rate Schedule SPP; and (2) (a) the avoided cost of energy to Allegheny in the prior usage month based on purchases under bilateral contracts, if any, and purchases/sales from the PJM energy market, excluding any energy costs incurred in serving Large Loads pursuant to Schedule LL; or (b) such alternative rate as mutually agreed upon by the parties.

- I. Renewable Energy Certificates: If the parties mutually agree that Allegheny will purchase the entire capacity and/or energy output of the AES/QF, then the value for renewable energy or other certificates generated by the AES/QF facility may be included in the negotiated rate. Otherwise, the AES/QF will retain ownership of any such renewable energy or other certificates.
- J. No AES/QF, other generator or consumer-member of a Member may be compensated under this or similar wholesale rate schedule of Allegheny if the AES/QF is also being compensated by PJM or another entity under a PJM or similar program for providing the same generation services during the same times.
- K. Allegheny will make direct payments to the AES/QF on a monthly basis or as otherwise mutually agreed upon longer period.
- L. If any AES/QF, which is also a Large Load, is connected to a delivery point served under Schedule LL, the payments received under Sections F, G, H and I will be tied to the specific power supply and transmission arrangements used to serve the AES/QF/Large Load.

This Rate Schedule SPP was reviewed and approved by the Allegheny Board of Directors on November \_\_, 2008 and supersedes all previous versions.

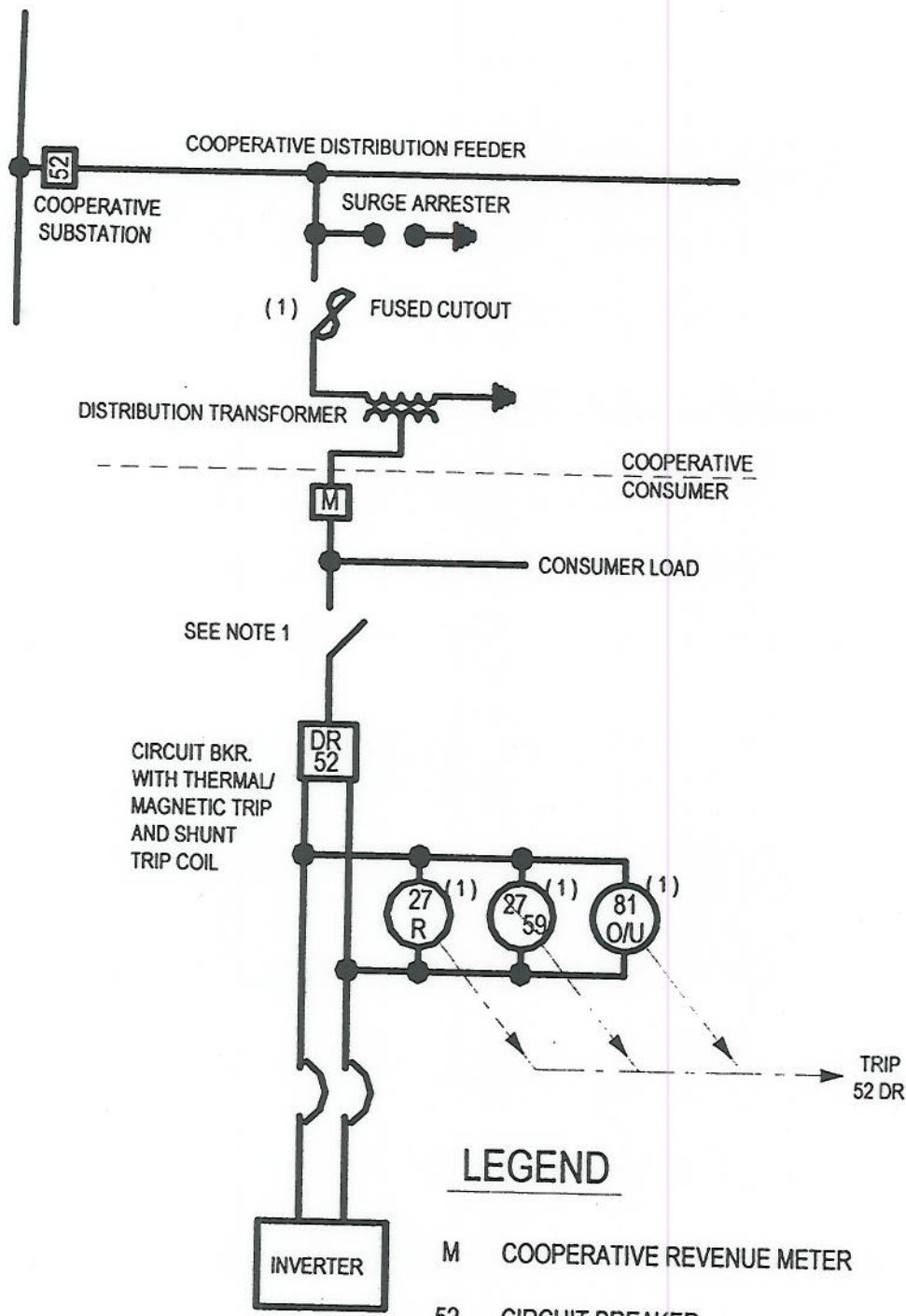
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Secretary

November \_\_, 2008

ALLEGHENY ELECTRIC COOPERATIVE, INC.  
212 Locust Street, P.O. Box 1266  
Harrisburg, PA 17108-1266





**LEGEND**

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

**NOTE:**

1. SWITCH MUST BE PADLOCKABLE AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES

TYPICAL PROTECTION  
EXAMPLE FOR SINGLE  
PHASE INVERTER

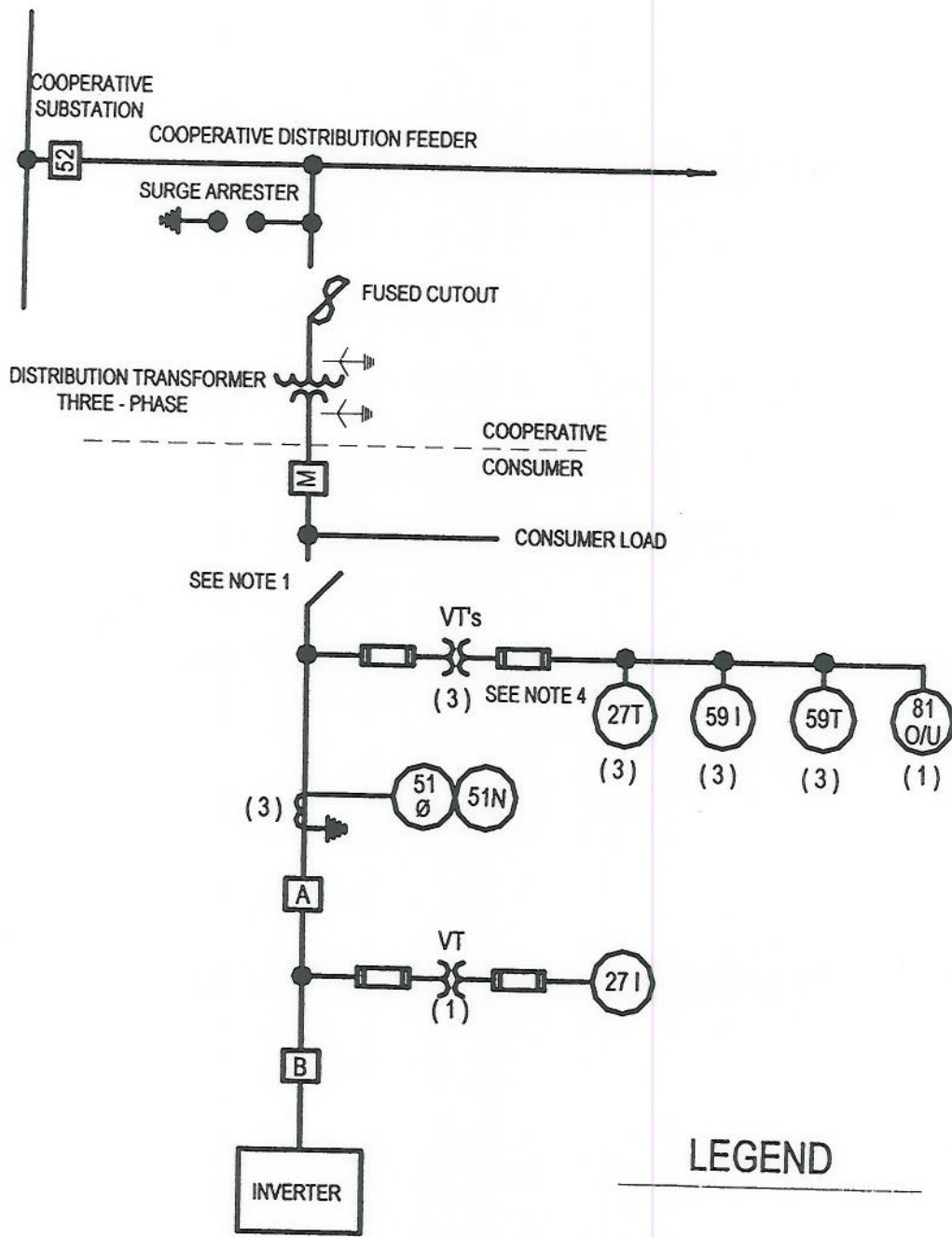
Dwg. No. CCS - IPD - 01

Drawn: DRF  
Checked: BH  
Approved: BH  
Date: 11-03-05

BEDFORD RURAL ELECTRIC COOPERATIVE

Bedford, PA

Revisions  
RFG 1/9/06



**NOTE:**

1. SWITCH MUST BE PADLOCKABLE AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES
2. ALL PROTECTIVE RELAYING TRIPS BREAKER A
3. SOURCE BEHIND INVERTER CAN BE BATTERY, FUEL CELL, PV OR OTHER DC SOURCE, POWER CONDITIONING SHOULD BE DONE BEFORE INVERTER
4. IF GENERATION IS LESS THAN 100 KW USE ONE EACH OF 27T, 59I, 59T AND ONE VT

- LEGEND**
- 27I INSTANTANEOUS UNDERVOLTAGE
  - 27T TIME UNDERVOLTAGE
  - 51 TIME OVERCURRENT - PHASE
  - 51N TIME OVERCURRENT - GROUND
  - 52 CIRCUIT BREAKER
  - 59I INSTANTANEOUS OVERVOLTAGE
  - 59T TIME OVERVOLTAGE
  - 81 O/U OVER / UNDER FREQUENCY
  - M COOPERATIVE REVENUE METER

TYPICAL PROTECTION  
EXAMPLE FOR 3 - PHASE  
INVERTER WITH WYE GROUND -  
WYE GROUND TRANSFORMER

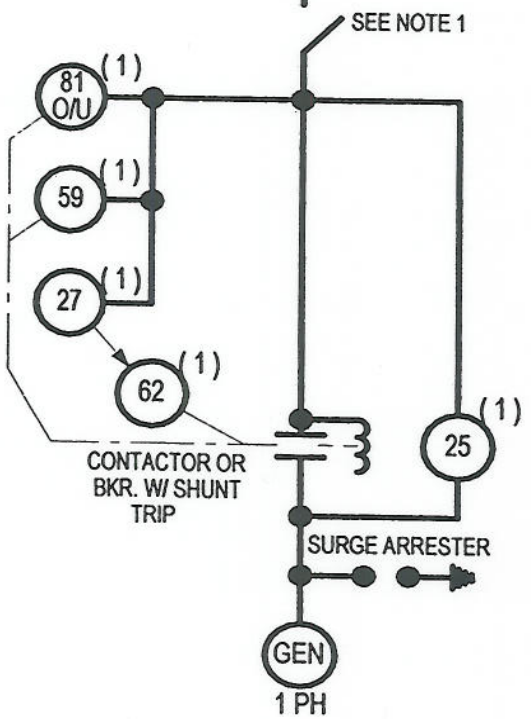
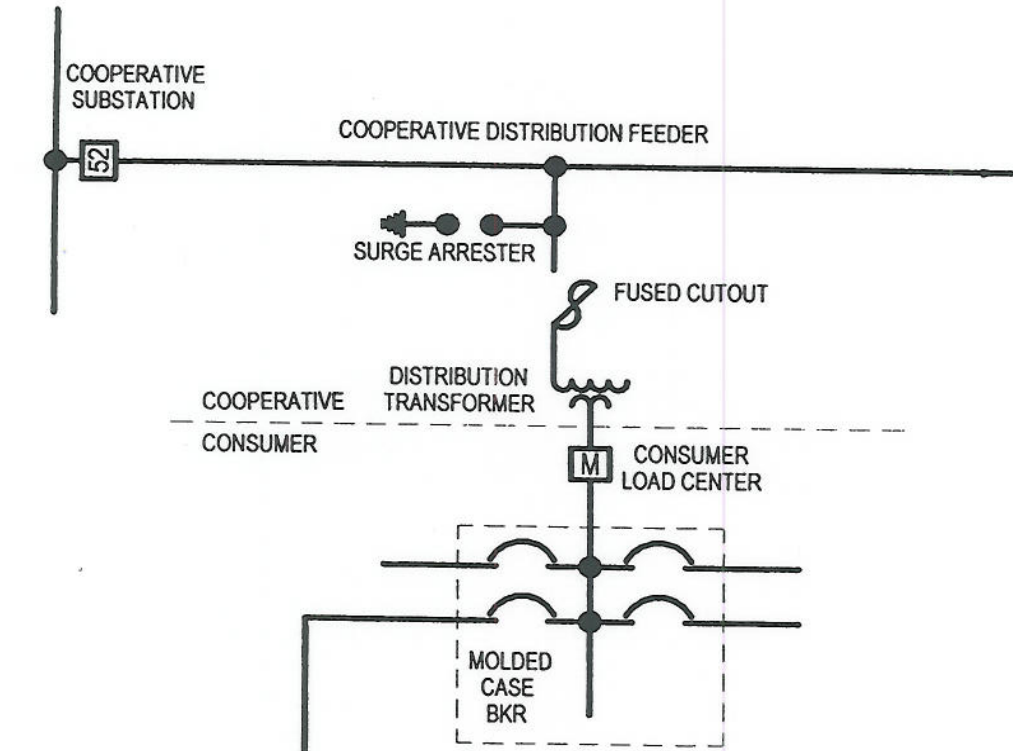
Dwg. No. CCS - IPD - 02

Drawn: DRF  
Checked: BH  
Approved: BH  
Date: 11-03-05

**BEDFORD RURAL ELECTRIC COOPERATIVE**

Bedford, PA

Revisions  
RFG 1/9/06



**LEGEND**

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

**NOTE:**

1. SWITCH MUST BE PADLOCKABLE AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES

TYPICAL PROTECTION  
EXAMPLE FOR SINGLE PHASE  
INDUCTION GENERATOR

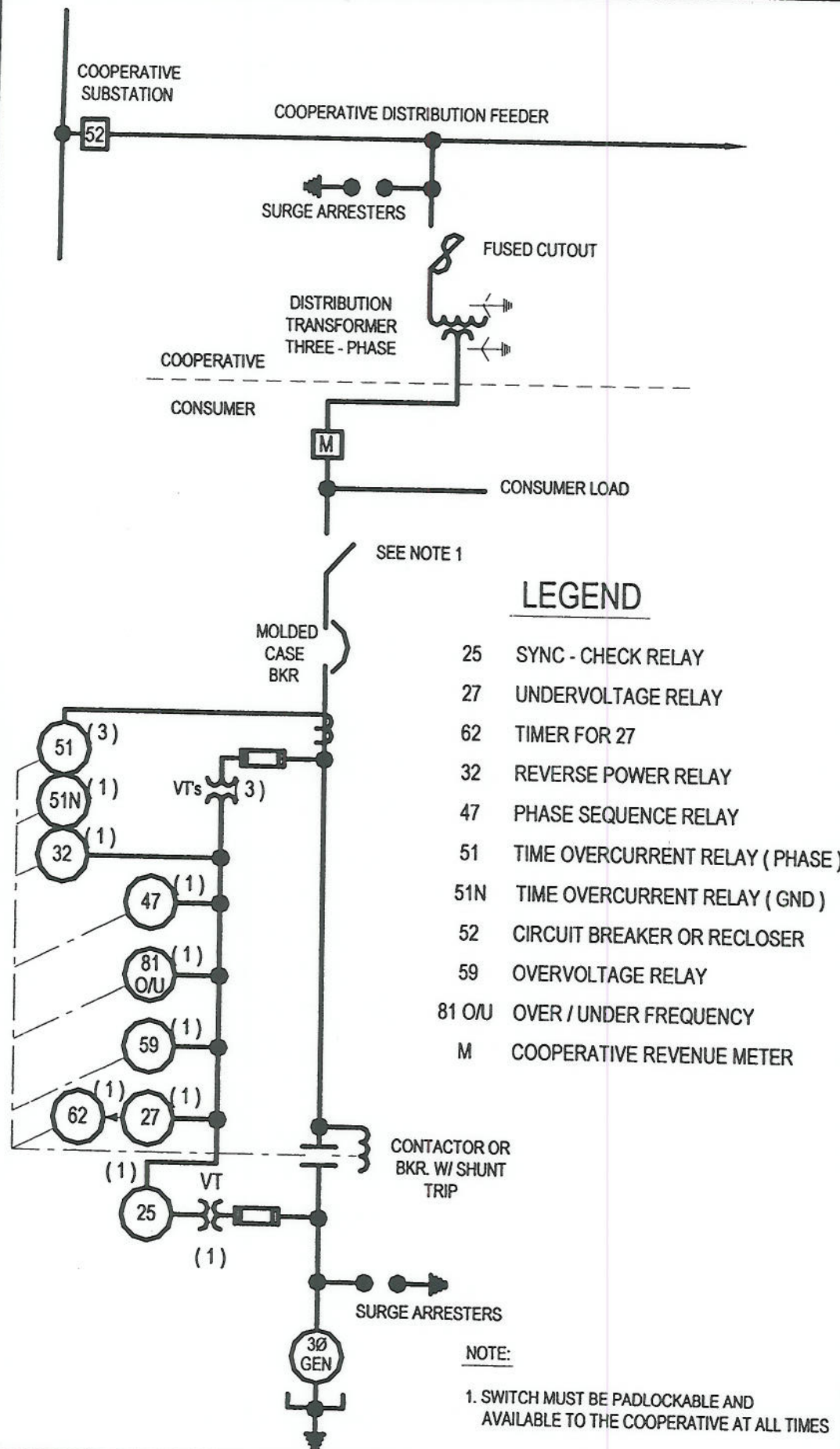
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Drawn: DRF  
Checked: BH  
Approved: BH  
Date: 11-03-06

BEDFORD RURAL ELECTRIC COOPERATIVE

Bedford, PA

Revisions  
RFG 1/8/06



TYPICAL PROTECTION  
EXAMPLE FOR THREE - PHASE  
INDUCTION GENERATOR

Dwg. No. CCS - IPD - 04

Drawn: DRF  
Checked: BH  
Approved: BH  
Date: 11-03-05

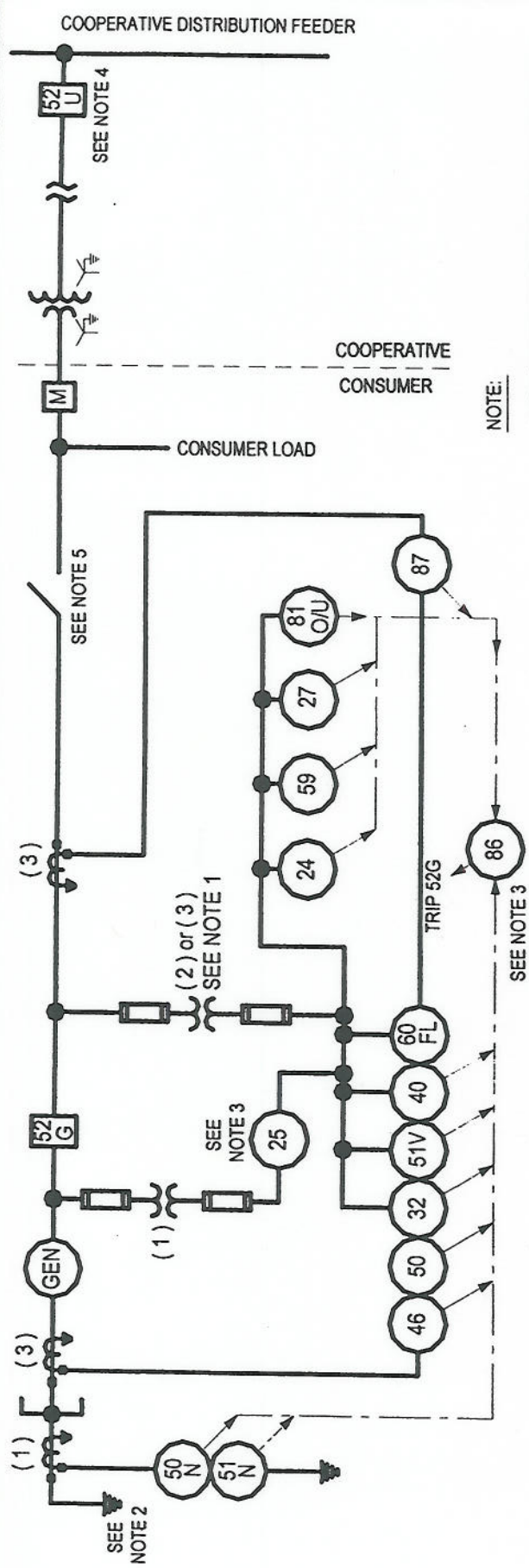
**LEGEND**

- 25 SYNC - CHECK RELAY
- 27 UNDERVOLTAGE RELAY
- 62 TIMER FOR 27
- 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

BEDFORD RURAL ELECTRIC COOPERATIVE

Bedford, PA

Revisions  
RFG 1/9/06



**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
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 RECLOSING CIRCUIT BREAKER, RECLOSING SHOULD BE SUPERVISED BY A SYNC - CHECK RELAY (DEVICE 25)
5. SWITCH MUST BE PADLOCKABLE AND AVAILABLE TO THE COOPERATIVE AT ALL TIMES

**LEGEND**

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

Revisions  
RFG 1/9/06

**BEDFORD RURAL ELECTRIC COOPERATIVE**  
Bedford, PA

Drawn: DRF  
Checked: BH  
Approved: BH  
Date: 11-03-05

TYPICAL PROTECTION SCHEME  
FOR SMALL SYNCHRONOUS GENERATOR  
INDUCTION GENERATOR  
< 1 MW

Dwg. No. CCS - IPD - 05

## **Addendum No. 1**

RFP # 10-10470-2424

### **Long-term Ground Lease for Renewable Energy Generation on 90± acres in Napier Township, Bedford County, The Former Albert Nunez Farm**

Following are the answers to questions submitted in response to the above referenced RFP up to and including questions submitted during the Pre-Proposal Conference on June 9, 2010. All of the questions have been listed verbatim, as received by the Pennsylvania Turnpike Commission.

1. What is the specific location of the nearest substation where the solar project would be connected to the grid?  
**This is due-diligence information that the potential proposer is responsible for in his project research/proposal.**
2. What is the description / specifications of the substation where the solar project would connect to the energy grid?  
**This is due-diligence information that the potential proposer is responsible for in his project research/proposal.**
3. What is the size of the transmission lines connecting to the substation?  
**This is due-diligence information that the potential proposer is responsible for in his project research/proposal.**
4. What is the size of the transmission lines in the immediate region of the solar project?  
**This is due-diligence information that the potential proposer is responsible for in his project research/proposal.**
5. Does the Turnpike have any facilities in the immediate area that could receive generation directly from the solar project?  
**The Pennsylvania Turnpike Commission has the “Kegg” Maintenance facility located approximately 4.5 miles to the west of the subject property along the north side of the Turnpike. The “Bedford” Interchange lies approximately 8 miles to the east of the subject property.**
6. Does the Turnpike have any substantial demand in the area for metering?  
**Please see the response to question #5 above.**

7. Is the Turnpike interested in a long term power purchase agreement from the solar generation for either the generation or SREC's?  
*The Turnpike will consider all types of revenue - solar credits, PPA's, straight lease payments etc. It is up to the proposer to structure the proposal/offer.*
8. Is the Turnpike interested in purchasing the SREC's created from this solar project?  
*The Turnpike will consider the purchase of Solar RECS. Values should be defined; however the purchase of SRECS is not a requirement of the RFP.*
9. Would the Turnpike consider purchasing a long term energy hedge agreement from the solar project?  
*The Turnpike Commission will consider all options proposed.*
10. Due to the proposed site's proximity to a State park, are there any special or unusual environmentally related permitting issues for this project?  
*There are no known unusual or out of the ordinary environmental issues related to the proposed site. Any development proposal would need to have a "PNDI" search and would need to resolve any issues raised during this search. Other site investigations including, but not limited to "PHMC" clearances are also the responsibility of the proposer.*
11. Do you know how far the proposed site is from the Mostoller Landfill?  
*Approximately 25 miles.*
12. Are Napier Township officials aware of the proposed development?  
*The Napier Township Engineer is aware of the RFP.*
13. Can you provide the name/contact information of the Bedford Rural Electric representative you spoke to about this project?  
*The Commission spoke with Mark Rowan of Bedford Rural Electric. He can be reached at (814) 623-5101.*
14. Can you give us the restrictions on the covered bridge that accesses the property?  
*The bridge is listed as 12'-10" wide; 89' long; and owned by Bedford County. No other information is known about the restrictions of the bridge.*

15. Is the July 14 bid a final and binding offer or will there be an opportunity for further negotiation?

Please refer to Section I-15 of the RFP that reads:

**I-15. Best and Final Offers.** The Issuing Office reserves the right to conduct discussions with Proposers for the purpose of obtaining “best and final offers.” To obtain best and final offers from Proposers, the Issuing Office may do one or more of the following:

- a) enter into pre-selection negotiations;
- b) schedule oral presentations; and
- c) request revised proposals.

The Issuing Office will limit any discussions to responsible Proposers whose proposals the Issuing Office has determined to be reasonably susceptible of being selected for award.

16. Concerning due diligence, who is the appropriate contact for site access?

Donald Lowell.

17. What is the annual load in KWH at the Bedford interchange and at Keggs Maintenance?

Keggs Maintenance: Total KWH/12 months = 425,856

Bedford Interchange: Total KWH/12 months = 3,334

18. Would the PTC’s willingness to complete the project be adversely affected by an extended permitting process (i.e. 1-2 years for an interconnect agreement)?

No. The Commission anticipates that extensive due-diligence will be required for this project, and will work with the successful proposer in an effort to finalize an agreement. The Commission will expect the successful proposer to be vigilant with all of the necessary due-diligence efforts. Please refer to §I-23 and §I-25 of the RFP with regard to timing and deposits.

19. Do you have a time frame for award and lease execution?

We anticipate making a decision on the proposals within 3 – 4 months of receipt. The signing of a lease would be determined on many factors that are at present unknown, and we can’t identify any specific timetable for that.

All other terms, conditions and requirements of the original RFP dated May 17, 2010 remain unchanged unless modified by this Addendum.



SIGN-IN SHEET

DATE: June 9, 2010

PREPROPOSAL CONFERENCE RFP #10-10470-2424

TIME: 10:00 AM

RENEWABLE ENERGY GENERATION

COMPANY NAME	REP NAME	ADDRESS	PHONE	EMAIL
1 Community Energy, Inc.	Ian Sneed	201 King of Prussia Rd. Suite 550 Radnor PA 19087	610-230-0369	ian.sneed@communityenergyinc.com
2 NRG	Michael Kilian	Buchanan Interstate + Renss 213 Market St. Harrisburg PA 17104	717-237-4810	Michael.Kilian@nrg.com
3 METAL FOUNDATION	"	"	"	"
4 SET INDUSTRIES	"	"	"	"
5 Constellation Energy	Eric Kibruene	111 Market Place Towhomet, MD 21202	443-257-3751	Eric.Kibruene@Constellation.com
6 Constellation Energy	Patrick Regan	9090 Green Tree Road, Ste 200 Pittsburgh, PA 15230	412-359-9798	Patrick.Regan@Constellation.com
7 AMRESCO INC.	Tim Andrade	CNE E. URBANA AVE. STE 105 EXTON, PA. 19341	(610) 458 5573 Ext 2353	Timandrade@Amresco.com
8 Pat Turnpike Commission	JACK Christensen	Admin Bldg / PTC	934-9551x3420	JChriste@Paturnpike.com
9 " "	Doreen McCall	"	" X 3151	DMcCall@PATURNPIKE.COM
10 " "	Jeff Hess	PTC West Reg. Office New Stanton Pa	784 755 5012	jhess@paturnpike.com
11 " "	VAI FAYNE	Admin. Bldg. / PTC	934-9351/44291	vafayne@paturnpike.com
12 Pat Turnpike Commission	Don Lowell	P.O. BOX 67676 HARRISBURG PA 17106-7676	(717) 920-7566	dlowell@Paturnpike.com
13 Pat Turnpike Commission	Wanda Metzger	PO Box 67676 HBG Pa 17106	(717) 934-8557 *4282	WMetzger@Paturnpike.com
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