



FALL RIVER RURAL ELECTRIC COOPERATIVE, INC.

GENERAL POLICY No. 420

**SUBJECT: COOPERATIVE PURCHASE AND WHEELING OF POWER AND ENERGY
FROM SMALL POWER PRODUCERS AND CO-GENERATORS**

I. PURPOSE:

This policy defines the manner in which the Cooperative will fulfill its legal obligations pursuant to the Public Utilities Regulatory Policies Act of 1978, 16 U.S.C. (PURPA).

II. POLICY:

It shall be the policy of The Cooperative to interconnect and operate in parallel with co-generators and small power producers that are determined as “qualifying facilities” under the Federal Energy Regulatory Commission Regulations, 18CFR Part 292. The Cooperative has the option of purchasing the power output of such facilities or providing wheeling service to an adjacent utility that the owner of the facility has made prior contractual arrangements for receiving such power. Nothing in this policy shall limit the Cooperative’s ability to evaluate such qualifying facility and determine terms and conditions that are mutually satisfactory to all parties, and in no way shall they be detrimental to the operation of the Cooperative’s facilities and customers.

III. RESPONSIBILITY:

The CEO/General Manager is responsible for seeing that the provisions of this policy are carried out.

IV. DEFINITIONS:**A. A/G**

Administration and General

B. Avoided Cost (PURPA)

For purposes of this section, the term “incremental cost of alternative electric energy” means, with respect to electric energy purchased from a qualifying co-generator or qualifying small power producer, the cost to the

electric utility of the electric energy which, but for the purchase from such co-generator or small power producer, such utility would generate or purchase from another source.

C. Capacity (BPA)

The maximum load that a machine station or system can carry under existing service conditions. Equivalent terms: peak capability, peak generation, firm peak load, carrying capability. In transmission, the maximum load a transmission line is capable of carrying.

D. Cooperative

Fall River Rural Electric Cooperative, Inc. 1150 N 3400 E, Ashton, ID

E. Energy (BPA)

The definition of energy is usable power that comes from heat and electricity, etc. In electrical systems energy is expressed in kilowatt-hours.

F. Extraordinary (Webster)

Beyond or out of the ordinary or common order or method; sent for a special purpose or on a particular occasion.

G. O/M

Operation and Maintenance

H. Q.F. (PURPA)

Qualifying small power production facility means a small power production facility which the Commission determines by rule, meets such requirements (including requirements respecting fuel use, fuel efficiency, and reliability) as the Commission may, by rule, prescribe; and which is owned by a person not primarily engaged in the generation or sale of electric power (other than electric power solely from co-generation facilities or small power production facility).

I. Q.F.O. (PURPA)

Qualifying small power producer means the owner or operator of a qualifying small power production facility.

J. Droop

No Load Speed minus Full Load Speed divided by the No Load Speed in a Synchronous Generator.

K. VARS

Volt Amp Reactive; a measurement of Reactive Power in a circuit.

L. Lagging

The current in a circuit is lagging the voltage or behind some amount in their respective AC sinusoidal position.

V. PURCHASE OF OUTPUT:

A. Sale and/or Purchase:

The Cooperative will purchase, at its "avoided cost", power and energy from qualifying facilities in accordance with Sections 201 and 210 of PURPA, so long as such purchase of power and energy does not exceed the base load requirements of the Cooperative. The Cooperative will also sell power and energy to the qualifying facility as it may require.

The Cooperative will sell the qualifying facility its power needs over and above its generating capabilities or, at the qualifying facility's request, supply the power requirements of the qualifying facility.

B. Avoided Cost:

The Cooperative will base its "avoided cost" on that portion of its wholesale power cost, which, by virtue of the purchase from the qualifying facility, it now avoids.

1. Energy cost avoidance will equal the wholesale cost of energy on a one-for-one basis.
2. Firm capacity cost avoidance will equal the wholesale cost of firm capacity on a one-for-one basis for all capacity the qualifying facility can provide on an equally firm basis as the Cooperative's wholesale power supplier. Payment for non-firm capacity shall be determined on a project specific basis, taking into consideration the criteria set forth in Section 292-304(e) of Subpart C of the regulations of the Federal Energy Regulatory Commission implementing PURPA.

VI. WHEELING OF OUTPUT:

A. General:

The Cooperative will transmit the output of a qualifying facility to any of its interconnection points with other utilities for the purpose of allowing for the sale of such output to another utility other than the Cooperative. The following guidelines will be used for determining a wheeling path for the purpose of transferring energy and power from a parallel connected qualifying facility through the Cooperative's system to an interconnecting point with another utility, and the method of determining facility use rates to be charged by the Cooperative to the qualifying facility for this service. These guidelines are established to provide a uniform approach for wheeling energy and power from qualifying facilities to determine a specific wheeling path. This policy will also establish a formula for setting facilities' use rates for each project on a project specific basis. In addition, the provisions of Sections 203 and 204 of PURPA, defining standards for protection of utility rate payers in the wheeling of PURPA qualified resources, shall also apply.

B. Wheeling Path:

The wheeling path shall be determined from the qualifying facility interconnection point with the Cooperative's system, to the Cooperative's system interconnection point with the utility to which the energy output of the qualified facility is being wheeled to. The path shall consist of the Cooperative's distribution lines, substations and transmission lines as applicable. The path selected shall be the shortest path with sufficient available excess demand capacity to carry the transfer in the Cooperative's system. The determination of excess demand capacity required to serve the qualifying facility will be the amount applied for by the qualifying facility owner.

C. Use of Facilities Rate:

The following formula will be applied on a nondiscriminatory, non-preferential basis in setting the rate for use of Cooperative facilities in providing wheeling service to qualifying facilities.

The monthly charge per kilowatt of wheeling demand shall be one-twelfth of the annual cost per kilowatt of capacity of the facilities specified by the wheeling path:

1. Kilowatt capacity of facilities shall be determined by the Cooperative as:

Distribution Lines – Thermal capacity (KW) of the system average distribution line at 75 C or seven percent voltage drop, whichever is the limiting factor in the line capacity. The capacity shall be determined at 97% lagging power factor.

Substations – The maximum thermal rated capacity (KW) of the system average substation at 97% lagging power factor.

Transmission Lines – Thermal capacity (KW) of the system average transmission line at 75 C or eight percent voltage drop, whichever is the limiting factor in the line capacity. The capacity shall be determined at 97% lagging power factor.

2. Value per kilowatt of capacity (A) of each facility shall be determined in accordance with the following formula:

$$A = P/C \times O \quad \$/\text{KW}$$

Where:

P = Value of the facility in the wheeling path will be determined on the basis of average system value. This shall be determined by the Cooperative.

C = Capacity of the facility as determined in C-1 and illustrated in attached line capacity graphs.

O = Operating and margins ratio. This is the ratio of the Cooperative's prior 3 years average annual total operating costs and margins, divided by the Cooperative's prior 3 years average utility plant in service. All values in the wheeling charge formula shall be reviewed and adjusted annually, on June 30 of each year, and be based upon the Cooperative's average system values for the prior three (3) calendar years.

3. Monthly wheeling charge shall be one-twelfth the summation of the annual costs (A) of each facility in the wheeling path, as determined in C-2 times the average three highest month's peak generator demand meter reading for the preceding twelve month period.
4. The qualifying facility owner will pay extraordinary operations and maintenance expense incurred by the Cooperative that would not have been incurred absent the qualifying facility.

VII. SALE OF POWER & ENERGY TO QUALIFYING FACILITY:

A. Rates:

Power and energy sales to the qualifying facility shall be made at standard power and energy rates established for service to Cooperative members by the Board of Directors.

B. Conditions for Sale of Power:

The furnishing of power and service to the qualifying facility shall be subject to all policies of the Cooperative and the terms of the agreement with the qualifying facility, including force majeure and limitations on continuity of service.

C. Resale of Power:

The Cooperative's wholesale power sales contract with the Bonneville Power Administration prohibits the Cooperative from reselling any power sold by Bonneville to the Cooperative. The qualifying facility owner may not resell any power delivered by the Cooperative to the qualifying facility.

VIII. GENERAL POLICY PROVISIONS:

A. Application.

The Cooperative will require a completed application as provided by the Cooperative for the interconnection of a qualified facility to the Cooperative's electric system before any action will be taken by the

Cooperative. The Cooperative will require an advance deposit equal to the estimated expense of any work to be performed on the application. If the application is withdrawn, the Cooperative will refund any unused portion of the deposit. Applications will be processed in the order received by the Cooperative.

B. Non-Subsidization:

The Cooperative members cannot subsidize the qualifying facility. Accordingly, all costs incurred by the Cooperative which are associated with the qualifying facility including but not limited to, engineering, construction, inspection, maintenance, operations, wheeling charges to other utilities, line losses, material and other related expenses are to be paid by the qualifying facility owner.

C. The Cooperative and its members are held harmless from all acts or omissions on the part of the qualifying facility. The qualifying facility will be required to be insured in a manner and degree deemed acceptable by the Cooperative, including having the Cooperative as named insured on the qualifying facility owner's liability insurance policy. Further, the qualifying facility will be required to reimburse the Cooperative for additional insurance premiums of the Cooperative that are necessary because of the connection of the qualifying facility.

D. Quality of Service and Safety:

Service to Cooperative members shall not be degraded because of the presence or connection of the qualifying facility.

The qualifying facility shall construct, operate and maintain its facilities or cause them to be constructed, operated and maintained, in a manner conforming to all existing safety codes, including, but not limited to, the safety code of the Cooperative (Federal Occupation Safety & Health Code), National Safety Code ANSI-C2-1984 or its successor, applicable Rural Electrification Administration regulations, regulations of any other applicable local, State or Federal Agency, and present utility operating practices established by the Cooperative. Failure to comply shall be cause for disconnection of the qualifying facility.

E. Inspection:

The Cooperative reserves the right to inspect the qualifying facility, as it deems necessary, for compliance with the rules, regulations and by-laws of the Cooperative, to assure proper operation of the qualifying facility for the protection and safety of Cooperative employees, and for satisfactory operation in parallel with the Cooperative's system. Such inspection by the Cooperative shall not relieve the owner of the qualifying facility from his/her responsibility to install, operate, and maintain the facility in a safe and satisfactory manner.

F. Excess Capacity:

The Cooperative will serve all qualifying facilities with excess capacity only. Excess system capacity will be allocated to qualifying facilities on a first come – first served basis. The starting date of generation or wheeling will be the determinant of priority for the allocation of excess capacity.

G. Connection and/or Improvement Costs:

The cost of connection to or improvements of the Cooperative system that are necessary for the Cooperative to accept or wheel power from a qualifying facility shall be the responsibility of the connecting qualifying facility.

The Cooperative shall determine the required improvements and the connecting qualifying facility owner shall pay all costs directly attributable to the qualifying facility including, but not limited to, engineering, material, construction, inspection and other related expenses.

If additional loads are added to the Cooperative system other than qualifying facilities, and the system requires upgrading to serve all loads including the qualifying facilities, any additional costs incurred in the upgrading that are specifically necessitated only by the qualifying facility shall be borne by the qualifying facility. Failure to pay such costs will be cause for disconnection from the system.

H. Engineering Analysis:

Each connection of a qualifying facility to the Cooperative's transmission or distribution system will require individual engineering analysis. The

Cooperative encourages prospective qualifying facility owners to employ qualified engineering firms in the design of their facilities. The Cooperative will provide all necessary system data for use by the engineer, including line characteristics, substation capabilities, sectionalizing schemes and voltage regulation programs. The design of the interconnecting facilities and system modifications shall incorporate apparatus and devices compatible with those existing on the Cooperative system, and compatible with the facilities of other qualifying facility owners connected to the Cooperative system. The design shall incorporate features that will permit construction, operation and maintenance of the qualifying facility without disruption or degradation of service to the consumers served by the Cooperative. The Cooperative will provide the design and construction service for the Cooperative's portion of the interconnection on a cost reimbursement basis. A copy of the Cooperative's Standards for Interconnection and Metering is available upon request. These Standards may be revised and modified from time to time by the Cooperative. Such Standards are necessary to protect persons and property, including Cooperative personnel, and to avoid abnormal voltages, voltage fluctuations and harmonic content that might cause interference with the Cooperative's members or equipment.

I. Metering:

Metering of KW, kwh and KVARH quantities shall be provided by "in" and "out" meters as appropriate. Meter data will be collected on the working day nearest the last day of each month. It is recommended the qualifying facility owner independently read the meter as a check on the Cooperative's reading.

J. Accounting and Billing:

1. The Cooperative will maintain an accurate and complete accounting of all expenses related to the application and connection of each qualifying facility, and shall promptly bill the qualifying facility owner for all related expenses. Related expenses shall include, but not be limited to, labor, materials, insurance,

overheads, consulting services, meter reading, switching costs, mileage and equipment costs. Based on the meter readings in Paragraph I above, the Cooperative will monthly render a statement showing detail of all debits and credits to the qualifying facility owner's account for charges or credits as established by the contract between the qualifying facility owner and the Cooperative, and net monies owed by the Cooperative or due to the Cooperative. The Cooperative may require a security payment in advance from the qualifying facility owner covering estimated costs prior to initiating any action by the Cooperative relative to the qualifying facility owner's application or interconnection.

2. Qualifying facility owner shall compensate the Cooperative for VARs supplies for power factors below ninety-seven percent lagging. The compensation shall be equal to a 1% increase in the wheeling charge for each percentage point or fraction thereof (0.5 or greater) by which the average lagging power factor is less than 97%, or the current power factor percentage being charged. The Cooperative may elect to waive the power factor adjustment in whole or in part. The Cooperative will not compensate the qualifying facility for any VARs.

K. Proof of License and Permits:

Prior to executing an agreement providing for interconnection, the qualifying facility owner shall submit proof to the Cooperative that all licenses, permits or approvals necessary for operation have been obtained from applicable federal, state or local authorities. Further, the qualifying facility owner shall obtain written acceptance from the Cooperative of the design, plans, specifications and performance data of the facility; shall submit proof of all insurance requirements to the Cooperative; shall demonstrate to the Cooperative's satisfaction that the facilities have been completed, and shall demonstrate that all features and equipment of the facility are capable of operating in conformance with the Standards listed in Item D above.

L. Written Agreement:

Prior to interconnection of a qualifying facility with the Cooperative system for the purpose of output, purchase or wheeling, the Cooperative and the qualifying facility owner shall enter into a written agreement. The written agreement shall set forth in necessary detail the manner in which the Cooperative shall purchase from, sell to, or wheel power and energy for the qualifying facility.

The agreement shall also provide for the facilities to be constructed, the character of service and the planned mode of operation and maintenance of the facilities. The agreement shall also address the rate, billing and payment arrangements for power and energy transactions, the billing and payment procedures for Cooperative expenses related to the qualifying facility, and other items that are a necessary and integral part of the agreement.

PART B: Standards for Interconnection and Metering For Qualifying Facilities
General Provisions:

A. General:

This document contains the guidelines for the minimum interconnection, metering, protection and operation requirements for safe and effective operation of qualifying facilities that will be connected in parallel with the Cooperative System.

B. Cooperative Approval:

Although these guidelines are established to provide a uniform approach for qualifying facility projects, each project must be individually examined and approved by the Cooperative prior to interconnection. Approval by the Cooperative does not endorse the design, safety or adequacy of the qualifying facility.

C. Hold Harmless:

The Cooperative will not assume any responsibility for protection of the qualifying facility or of any other portion of the qualifying facility's electrical equipment. The qualifying facility owner is fully responsible for protecting his/her equipment in such a manner that faults or other disturbances on

the Cooperative system do not cause damage to the qualifying facility's equipment.

D. Qualifying Facility Costs:

The qualifying facility owner will bear the costs resulting from any additional equipment that the Cooperative must install to allow parallel operation of the qualifying facility.

E. Generator Specifications:

1. All qualifying facility generators larger than 40 KVA shall be three-phase generators connected to three-phase circuits.
2. Qualifying facility generators of 40 KVA and smaller may be either single-phase or three-phase.

Interconnection:

A. Codes and Regulations:

The qualifying facility owner shall design, construct, install, own, operate and maintain the qualifying facility. Installation shall be in compliance with all safety codes, including, but not limited to the safety code of the Cooperative (Federal Occupational Safety & Health Code), National Safety Code ANSI-C2-1984 or its successor, applicable Rural Electrification Administration regulations, regulations of any other applicable local, State or Federal Agency, and prudent utility operating practices established by the Cooperative. Failure to comply shall be cause for disconnection of the qualifying facility. The Cooperative will not perform any engineering, construction or repair of the qualifying facility.

B. Disconnection:

The qualifying facility shall be designed to automatically disconnect when Cooperative service is interrupted.

C. Quality of Service:

Interconnection of the qualifying facility with the Cooperative's system shall not cause any reduction in the quality or reliability of service provided to the Cooperative's customers. This includes, but is not limited to, abnormal voltages, voltage fluctuations and harmonic content that causes interference with customer or Cooperative equipment.

D. Disconnect Switches:

An accessible, lockable disconnect switch is to be provided to disconnect the qualifying facility from the Cooperative system. This switch may be locked in the open position by Cooperative personnel if:

1. It is necessary for the protection of line crew personnel when working on de-energized circuits.
2. Inspection of qualifying facility equipment reveals a hazardous condition or lack of proper maintenance.
3. Qualifying facility equipment interferes with other customers or with the operation of the Cooperative system.

E. Power Factor:

The qualifying facility shall maintain a power factor at the delivery point of not less than ninety-seven percent (97%) lagging, or be subject to charges set out in Paragraph J 2 of the General Provisions above. The qualifying facility will also be subject to disconnect by the Cooperative if leading or lagging power factor interferes with system operation.

F. Isolating Transformer:

The Cooperative may require the qualifying facility owner to supply a dedicated isolating transformer for the protection of Cooperative and customer equipment and/or to match the qualifying facility voltage to be nominal voltage supplied by the Cooperative.

G. Test:

Both the qualifying facility owner and Cooperative personnel will jointly perform inspection and/or testing prior to initial energization of the qualifying facility system, in order to verify the proper operation of the generator and related equipment,

Metering:

A. Meter Location and Responsibility:

The Cooperative shall install and maintain meters to be located at a mutually agreed upon location. Metering will be to record net output of the qualifying facility and will be separate from any metering of customer's load. The qualifying facility owner shall pay all

costs of equipment installation and maintenance.

B. Meter Specifications:

Metering required will be determined by the Cooperative on a case by case basis, but will generally be the following:

1. Qualifying facility generator capacity less than 750 KVA will require a kWh/kw demand meter.
2. Qualifying facility generator capacity of 750 KVA and above will require a kWh/kW demand meter and two KVAR meters to measure reactive power flow to and from the qualifying facility generator.

C. Meter Testing:

The Cooperative shall inspect and test all meters upon installation and at least every two years thereafter. All meters shall be sealed and seals may only be broken by authorized Cooperative personnel. The cost of inspection, test and/or adjustment will be paid by the qualifying facility owner.

Relaying and Protection:

A. General:

Protective devices such as relays, circuit breakers, etc., that must be installed for the protection of the general public and the Cooperative facilities and personnel from damage or injury due to the energy produced by the qualifying facility will be installed at the qualifying facility owner's expense. The purpose of these protective devices is to promptly remove the qualifying facility generation in the event of a system disturbance.

B. Protection of Equipment Responsibility:

The Cooperative will not assume any responsibility for protection of the qualifying facility. The qualifying facility owner is fully responsible for protecting his/her equipment from faults or disturbances on the Cooperative system, in particular negative sequence currents, reverse power flow and single phasing.

C. Protective Relaying Approval:

The Cooperative, on a case-by-case basis, will approve the qualifying

facility's protective relaying scheme and equipment. Approval by the Cooperative does not endorse the design, safety or adequacy of the qualifying facility.

D. Corrections or Additions to Protective Equipment:

The Cooperative reserves the right to require the qualifying facility, at the expense of the qualifying facility owner, if determined to be necessary to protect the safety of Cooperative personnel and the integrity of the Cooperative's electrical system, to provide correction or additions to the existing protective and switching equipment in the event of modifications of government or industry regulations and standards or changes in the Cooperative system requirements.

E. Droop Requirements:

Synchronous generators must be operated with governors in the voltage droop mode (approximately 5% droop). A manual or automatic synchronizing relaying scheme must be provided to prevent circuit breaker closure on an unsynchronized generator.

F. Expansion of Qualifying Facility:

Any further modification or expansion of the qualifying facility generation or protection equipment must be reviewed and approved by the Cooperative.

G. Testing:

Prior to connecting a qualifying facility in parallel with the Cooperative system, Cooperative personnel shall inspect and/or test all protective relaying.

DC to AC Convertors:

A. Direct Current Generator Requirements:

Direct current generators may be operated in parallel with the Cooperative system through a synchronous inverter. The inverter installation will be designed such that a Cooperative system disturbance will result in the immediate removal of the inverter flow to the Cooperative. All harmonic and spurious frequencies generated by the qualifying generator-inverter combination must be limited by appropriate filters such that a reduction in

quality of service to present and future Cooperative customers does not occur. Qualifying facility owner shall install, at his/her expense, all present and future filters required as determined by Cooperative system operating requirements.

IX. PRIMACY OF POLICY:

This policy supersedes any existing policy or policies that may be in conflict with the provisions of this policy.

APPROVED BY THE CEO/GENERAL MANAGER



Bryan Case, CEO/General Manager

DATE APPROVED: February 24, 2003
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