

INTERCONNECTION WITH DISTRIBUTED GENERATION AND QUALIFYING FACILITIES

Policy No. 502

INTRODUCTION

1. GENERAL

The Cooperative, consistent with its continuing efforts to promote the wise and efficient use of the region and the world's energy supplies, submits this plan to encourage member-consumer use of renewable resources in the production of electric power. Through proper planning, a substantial portion of our future energy requirements can be derived from safe, alternative renewable, consumer-owned cogeneration small power production facilities.

The Cooperative is a contractual all requirements customer of the Bonneville Power Administration, BPA. The BPA will allow the Cooperative to purchase capacity and energy from a single Qualifying Facility (QF) without considering it a violation of the contract. Any purchases beyond 200 kW, or in an aggregate amount up to 200 kW without considering it a violation of the contract. Any purchases beyond 200 kW will be reviewed by the Cooperative on a case by case bases and with full knowledge of the BPA.

Set out herein is a guide for qualifying facilities to interconnect and operate in parallel with the existing Cooperative distribution system.

1.1 PURPOSE OF PLAN AND SPECIFICATIONS

The Cooperative intends this plan to be in full compliance with the Public Utility Regulatory Policies Act of 1978, United States Code, Title 16, Section 824a-3 (Supplement III, 1979), and the Federal Energy Regulatory Commission's regulations, Code of Federal Regulations, Title 18 Section 292.101-292.602 (1981).

1.2. DEFINITIONS

1.2.1. APPLICABILITY: For purposes of this Plan, the following terms have the meanings given them herein.

1.2.2.AVOIDED COSTS: means the incremental costs, as determined by the cooperative, of electric energy or capacity of both which, but for the purchase from the qualifying facility, the Cooperative would have purchased from another facility

1.2.3. BACKUP, MAINTENANCE, OR STANDBY POWER: means electric energy and capacity supplied by the Cooperative to replace energy and capacity ordinarily produced by a qualifying facilities generation equipment during a scheduled or unscheduled outage of the qualifying facility.

1.2.4. CAPACITY: means the capability of facilities to produce, transmit, or deliver electric energy measured in kilowatts, or kW.

1.2.5. CAPACITY COSTS: means the cost associated with providing the capability to deliver energy. They consist of the capital costs of facilities used to generate, transmit and distribute electricity, the fixed operating and maintenance costs of these facilities, and a reasonable margin.

1.2.6. COGENERATION FACILITY: means equipment used to produce both electric energy and steam, or forms of useful energy (such as heat) which are used for industrial, commercial heating, or cooling purposes. The intended output is first to be used internally for productive purposes with the balance of electric power and energy for sale to use by others.

1.2.7. ENERGY: means electric energy, measured in kilowatt-hours, or kWh.

1.2.8. ENERGY COSTS: means the cost associated with the purchase of electric energy.

1.2.9. FIRM POWER: means energy and capacity is delivered by the qualifying facility to the cooperative 100% of the time.

1.2.10. GENERATING FACILITY: means a utility, which regularly meets all, or a portion of its electric load through the scheduled dispatch of its own generating facilities.

1.2.11. INTERCONNECTION COSTS: means the reasonable cost of connection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the Cooperative that are directly related to installing and maintaining the physical facilities necessary to permit interconnected operations with a qualifying facility. Costs are considered interconnection costs only to the extent that they exceed the corresponding costs which the Cooperative would have incurred if it had not engaged in interconnection operations, but instead purchased from other sources as equivalent amount of electric energy and/or capacity.

1.2.12. INTERRUPTIBLE POWER: means electric energy or capacity supplied by the Cooperative to a qualifying facility subject to interruption under provisions of the Cooperative's rate schedules applicable to the class of consumer to which the qualifying facility would belong irrespective of its ability to generate electricity.

1.2.13. NON-GENERATING UTILITY: means a utility, which has no electric generating facilities.

1.2.14. ON-PEAK HOURS: means those hours which are defined as on-peak for the Cooperative's system peak determination and billing from the Bonneville Power Administration.

1.2.15. PURCHASE: means the purchase of electric, energy and/or capacity from a qualifying facility.

1.2.16. QUALIFYING FACILITY: is defined as a cogeneration or a small power production facility satisfying the conditions established in the Code of Federal Regulation, Title 18, Section 292.101 (b) (1) (1981), as applied when interpreted in accordance with the amendments to the Code of Federal Regulation, Title 18, Sections 292.201-292.207, adopted through the Federal Register 33028-33027 (1981).

1.2.17 SALE: means the sale of electric energy and/or capacity by the Cooperative to a qualifying facility.

1.2.18. SMALL POWER PRODUCER: is defined as a facility which 1) produces electric energy solely by the use of wind, solar, biomass, waste, renewable resource, or any combination thereof, 2) has a power production capacity which together with any other facility using the same source and located at the same site does not exceed 1.0 megawatts, 3) is not owned by a person or entity primarily engaged in the generation, sale, or distribution of electric energy, and 4) whose net output of energy and capacity is intended for sale to use by others.

1.2.19. SUPPLEMENTARY POWER: means electric energy and/or capacity supplied by the Cooperative, which is regularly, used by a qualifying facility in addition to that which the facility generates itself.

1.2.20. SYSTEM EMERGENCY: means a condition on the Cooperative's system, which is imminently likely to result in significant disruption of service to its customers or to endanger life or property.

1.2.21. WHEELING: means the transport of energy generated by others over a utility's transmission or distribution system.

1.2.22. NET METERING: is defined as the interconnection of customer-owned generation from a renewable resource (wind, solar, etc.) to the Cooperative's distribution system, in which the amount of energy produced at the service location is subtracted from the energy delivered by the Cooperative.

1.2.23. DISTRIBUTED GENERATION: is defined as modular electric generation or storage located near the point of use. DG systems include, but are not limited to, biomass based generators, combustion turbines, and micro turbines, wind energy systems, solar power systems, fuel cells, engine/generator sets and storage and control technologies.

1.3. COOPERATIVE RESPONSIBILITIES

It is the responsibility of the Cooperative to interconnect and operate in parallel with any QF, Qualifying Facility, which has properly applied for, complied with the general conditions and received approval for interconnection. The Cooperative will provide an application for interconnection and an agreement that are included in the plan. The Cooperative will also purchase any or all energy and capacity supplied by the QF or will provide wheeling for that energy and capacity to another utility upon request of the QF if such interconnection exists, and if capacity is available to applicable rates.

1.3.1. NET METERING CHARACTERISTICS

Net Metering is the interconnection of customer-owned generation from a renewable resource, such as, wind or solar to Glacier Electric's distribution system. The amount of generation produced by that facility displaces the amount of energy delivered to the site by the Cooperative, kilowatt-hour for kilowatt-hour. The size of the proposed generator should not exceed 50% of the connected load of the site being metered, and must not exceed 10 kW of generation capacity. Instances where the DG, Distributed Generation, generation exceeds 50% of the connected load may be addressed by the Cooperative on a case by case basis, and an exception may be made at the approval of the Board of Trustees. Typically interconnection to the distribution system is through the member's distribution panel and service meter loop. All net metering installation connected to the Cooperative grid will be required to comply with IEEE 1547 and UL standards.

For purposes of net metering on all installations, Glacier Electric utilizes an annual true-up on December 31st of each year of kilowatt – hours produced. . Power generated in excess of the actual load at the location of the DG facility will not be purchased by the Cooperative or credited to the member after the annual true-up period.

The production of the generation facility can be credited to a meter location not more than 3000 feet from the point of generation. The point of generation and the point of credit will both be treated as individual services, and will be subject to normal service fees

1.3.2. GENERATION FACILITIES EXCEEDING 10 kW CAPACITY

A generation facility exceeding 10 kW of capacity, will be interconnected via a dedicated meter loop, appropriately sized at the generation site and will not be net metered. Additional metering required for systems exceeding 10 kW will be installed by Glacier Electric staff at the expense of the member.

1.3.3. GENERATION EXCEEDING 200 kW CAPACITY

Generating facilities exceeding 200 kW of capacity must obtain certified designation as a Qualifying Facility (QF).

1.3.4. CONTRACTUAL AGREEMENT:

Any member wishing to connect to the Cooperative's distribution or transmission system for the purpose of generating electricity will be required to satisfactorily complete the appropriate contract and or agreement between the member and the Cooperative.

1.4. QUALIFYING FACILITY CHARACTERISTICS

Qualifying facilities are a distinct class of energy producer which consists of either small scale producers of commercial energy who normally self-generate energy for their own needs but may have occasional or frequent surplus energy or incidental producers who happen to generate saleable electric energy as a by-product of other activities. When a facility of this type meets the Federal Energy

Regulatory Commission's requirements for ownership, size and efficiency, the Cooperative may be obliged to purchase energy from these facilities based on a pricing structure referred to as avoided cost rates.

1.4.1. WHEELING

Wholesale wheeling is the sale and delivery of energy among buyers and sellers in the wholesale market, usually to parties who take delivery of the energy on the transmission system. Wheeling can also apply to delivery of power through a distribution system. Any wheeling arrangements involving Glacier Electric Cooperative and one of its' Cooperative members will be addressed by the Board of Trustees on a case by case basis. Wheeling will only be provided if capacity is available as determined by the Cooperative.

1.5. QUALIFYING FACILITY RESPONSIBILITIES

Any individual, corporation or partnership wishing to interconnect with the Cooperative system shall become a member of the Cooperative in accordance with the by-laws of the Cooperative. The QF must file an Application for Interconnection a minimum of 90 days to the proposed interconnection date. The application will inform the QF of its responsibilities regarding interconnection procedures and safety. To sell power the QF must enter into an agreement with the Cooperative. The agreement will define the Cooperative and QF requirements including rates, metering, insurance, and payments for interconnection costs. The QF, without cost to the Cooperative, shall agree to furnish, install, operate, and maintain in good order and repair any apparatus required for interconnection and abide by the applicable by-laws, policies, service rules, and regulations as adopted by the Cooperative.

1.6. RATES

The rates paid for energy generated by the qualifying facility will be set by the Board of Trustees based on the following discussion. The Cooperative may purchase any or all energy and when applicable capacity generated by the QF at the Cooperatives avoided cost. Avoided cost will be computed specifically for a QF cogeneration facility and for a power production facility. Wheeling rates for transport of electrical power and energy for sale and use outside of the Cooperative are established by Glacier Electric's Board of Trustees on a case by case basis. Wheeling may be provided if adequate capacity is available as determined by the Cooperative.

TERMS AND CONDITIONS FOR INTERCONNECTION WITH COGENERATION AND SMALL POWER PRODUCERS AND POWER PURCHASES FROM A DISTRIBUTED GENERATION FACILITY

1.0.REQUIREMENTS FOR INTERCONNECTION

1.1.COOPERATIVE MEMBERSHIP

Any individual, corporation, or partnership wishing to interconnect with the Cooperative's electric system shall become a member of the Cooperative in accordance with the by-laws of the Cooperative if they plan to operate in parallel with and use electricity provided by the Cooperative. The membership requirement for individuals, corporation, or partnerships wishing to only have their power wheeled will be reviewed when the application is made to the Cooperative to use said facilities for wheeling their power to another market or consumer.

1.2. APPLICATION FOR INTERCONNECTION

The Cooperative requires that all Distributed Generation Facilities (DG), file an Application for Interconnection not less the 90 days, nor more than 270 days prior to the proposed date of interconnection. All DGs are required to abide by the Terms and Conditions stated herein. The Cooperative shall endeavor to accept or reject the Application for Interconnection within 30 days. Acceptance depends on the accuracy of information provided on the application, and on the DG proposed compliance with the National Electric Code, the National Electrical Safety Code, the Cooperative Service Rules and Regulation, the Cooperatives by-laws, and any other state and local codes which apply to cogeneration and small power production facilities.

If in the Cooperative's opinion, the proposed facility does not qualify, the Cooperative will provide the member with a written explanation.

- a. Acceptance of the application shall not be construed as permission to interconnect with the Cooperative's system.

1.2.1. INSPECTION CERTIFICATE

An inspection certificate issued by the State of Montana, Blackfeet Tribal Inspector, whichever inspector has jurisdiction in the DG area, is required to assure that the wiring complies with the National Electrical Safety Code, National Electric Code, and other applicable local electric codes.

An inspection certificate issued by the local governing agency is required as a condition of interconnection to assure compliance with building codes, electrical codes, and environmental rules and regulations where applicable.

1.2.INTERCONNECTION COSTS

The member shall reimburse the Cooperative for its incremental cost resulting from interconnecting with the DG. The incremental interconnection cost shall include all reasonable costs of interconnection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the Cooperative directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with the DG, to the extent such costs are in excess of the corresponding costs which the Cooperative would have incurred had it not interconnected with the DG.

1.3.INTERCONNECTION

All interconnection sites will be required to comply with IEEE 1547 and other applicable standards. Interconnection is permitted only after all of the requirements as stated in Section 1 and 2 of the Terms and Conditions are met, and only after written authorization to interconnect is issued by the Cooperative. This authorization cannot be issued until all interconnection costs are paid, and does not relieve the member from the responsibility of installing, operating, and maintaining the facilities in a responsible and safe manner.

If in the opinion of the Cooperative, the member fails to abide by the terms and conditions of the Contract/Agreement including but not limited to subsequent operation of the generating facilities in a non-qualifying manner, the Cooperative will no longer be obligated to operate in parallel or purchase any capacity and energy made available and may notify the member and disconnect the generating facilities from the Cooperative's system. In the event the Cooperative reserves the right to make such disconnection including the termination of electric service if necessary.

2.0.SAFETY AND OPERATING STANDARDS

Safety and Operating Standards under which the Cooperative operates are imposed to protect Cooperative employees and the general public and are intended to guarantee a quality of service to the consumer members of the Cooperative. All QF's must operate in a manner, which will ensure the safety of Cooperative employees and the general public and must allow electric service to other consumers to remain unaffected by such interconnection.

2.1.COOPERATIVE ACCESS

Cooperative employees and authorized representatives have the right to enter the member's property at any reasonable time to ensure continues compliance with the Cooperative Safety and Operating Standards, and the accuracy of its meters. Such inspection by the Cooperative shall not relieve the member of the responsibility of installation operation and maintenance of the facilities in a responsible and safe manner.

2.2.DISCONNECT REQUIREMENTS

In order to provide for adequate safety of the Cooperative's employees when performing certain operation and maintenance functions on the Cooperative's system, it is essential that a means be available to positively disconnect the DG from the Cooperative's system such that there is no possibility that the DG could back feed through the service transformer and energize the primary

system. Consequently, the member shall furnish and install an Underwriter's Laboratory (UL) listed manual disconnect switch which shall be located between the member's DG and the Cooperative's system. The location of the switch shall be approved by the Cooperative and shall be housed in an approved enclosure, which can be secured with a padlock, or locking device and the Cooperative shall be provided with a key.

The Cooperative reserves the right to open the disconnect switch (therefore isolating the member's DG) without prior notice for any of the following reasons:

- A. System emergency and/or maintenance operation require such action.
- B. Discovery of a potentially hazardous condition relating to the DG is discovered.

The Cooperative will notify the DG following such emergency disconnects as soon as possible.

2.4. INTERCONNECTION LIMITS

Total capacity of the DG connected to a member's service location shall not exceed 50% of the total amperage load of that location. In the event that multiple DG units are proposed on the same primary feeder circuit, the total combined load of those DG units will not exceed 5% of the total load of that circuit. The Cooperative will determine total load in kW for each service location or primary feeder circuit. Instances where the DG generation exceeds 50% of the connected load may be addressed by the Cooperative on a case by case basis and an exception may be made at the approval of the Board of Trustees.

2.5. QUALITY OF SERVICE

Operation of the DG must not cause any reduction in the quality of service to other consumers nor interfere with the operation of the Cooperative's system. Installation and operation will be subject to compliance with IEEE 1547 standards. The member shall be responsible for taking whatever corrective action may be required and/of reimbursing the Cooperative for the cost of corrective action which it deems necessary to restore service to prescribed limits.

2.6. ELECTRICAL CHARACTERISTICS

The electrical characteristics of the DG shall conform to standards established by the Cooperative. The standards include, but are not limited to voltage, current, frequency, harmonics, and automatic synchronization.

3.0. SERVICE CONDITION

The furnishing and taking of electric service hereunder by the DG shall be subject to the service rules and regulations of the Cooperative. Such service rules and regulations are subject to change from time to time by superseding schedules as published by the Cooperative.

4.0. INSURANCE

All DG facilities shall obtain and maintain an insurance policy that provides liability insurance covering the operation of the DG and its associated equipment of not less than \$1,000,000. Satisfactory evidence of such insurance shall be provided to the Cooperative before the DG will be allowed to operate with the disconnect switch in the closed position. Member will notify the Cooperative of any policy changes and of the periodic policy renewals.

5.0. ATTORNEYS FEES

If a suit or action instituted by either of the parties to resolve a dispute regarding any of the provisions of this Agreement, the prevailing party in such suit or action shall be reimbursed for its costs, disbursements, and reasonable attorney fees.

6.0. METERING

The Cooperative will meter the DG to obtain billing data.

6.1. REQUIRED METERING

Metering for each DG location will be installed at the expense of the DG member/operator. The appropriate type of metering for each location will be determined and installed by the Cooperative, which will retain sole ownership of the equipment.

In addition to required metering, the Cooperative at its option and with the consent of the DG shall have the right in its sole discretion to install additional metering equipment for the collection of data for research purposes. The Cooperative will furnish such metering equipment and pay all the associated costs of operations and maintenance.

6.2. METER READING

The meter(s) at the generation site shall be read monthly at the same time and in the same manner as prescribed for other members of the Cooperative in the same consumer classification.

6.3. METER CONFIGURATIONS

Metering schematics for interconnections are illustrated in the attached guidelines for operating, metering, and protective relaying for non-utility generators. The appropriate configuration shall be part of the requirements for Interconnection and shall comply with IEEE 1547 standards.

Approved Date: 5/28/15

President: 

