

POLK-BURNETT ELECTRIC COOPERATIVE

Policy No.: **M-32**

Subject: **Distributive Generation**

I. Objective

To support distributed generation as a viable and sound means of meeting electric needs of various consumer groups, and establish the procedures for supporting such service requests. These procedures shall take into account issues of safety, reliability and cost fairness.

II. Policy and Availability

Distributed Generation interconnection is available under this policy for all single-phase and three-phase members who wish to install facilities using resources to generate all or part of the electrical requirements of the member, where such facilities are connected in parallel with Polk-Burnett Electric Cooperative, and where such facilities are approved by Polk-Burnett. Interconnection is subject to all other rules, conditions, practices and policies of the cooperative in addition to those set out in this policy.

Distributed Generation shall take into account applicable laws, the voluntary consideration by the cooperative of operational guidelines contained in PSC Chapter 119 Wisconsin Administrative Code, application forms as amended, interconnection agreements as amended, and issues of safety, reliability and cost fairness.

An Eligible Electrical Generating Facility (EEGF) for the purpose of this policy is a generator of 20 kW or less powered by solar electric energy, wind, dedicated crops grown for electricity generation, anaerobic digestion of livestock or food processing waste, fuel cells or micro turbines powered by renewable fuels, or hydroelectric energy.

III. Facilities 20 kW or less Generation Capacity

A. Application, Agreement and Start-Up Testing: A member who wishes to interconnect a renewable distributed generation facility with a generation capacity of 20 kW or less shall meet the following requirements, which requirements are subject to revision by Polk-Burnett at any time:

1. A Standard Distributed Generation Application Form, developed by cooperative management, must be completed to the satisfaction of the cooperative and approved.
2. A Standard Distributed Generation Interconnection Agreement, to be developed by cooperative management, must be executed between the member and the cooperative.
3. A Distributed Generation commissioning test must be successfully conducted, documented and approved by the cooperative. Cooperative personnel must be present to observe and document this testing.

B. Additional General Conditions: The following additional requirements and standards must be met:

1. The member-generated electricity must not, in the opinion of the cooperative, adversely affect the cooperative distribution system safety, reliability, line loading or control.
2. Where necessary, for reasons of public or employee safety or the potential for a distributed generation facility to cause problems with the service of other members, Polk-Burnett may require a separate distribution transformer(s) for a member having a facility.

3. Where necessary, to avoid the potential for a distributed generation facility to cause problems with the service of other members, Polk-Burnett may limit the capacity and operating characteristics of single-phase generators in a manner consistent with Polk-Burnett's limitations for single-phase motors. Ordinarily, single-phase generators should be limited to a capacity of 20 kW or less.
4. The member's facility must have a system of automatically isolating the generator from Polk-Burnett's system upon loss of Polk-Burnett's supply. For synchronous and induction generators, such protection against continued operation when isolated from the system ordinarily consists of overcurrent protection (fuse or circuit breaker) plus a voltage/frequency controlled contactor which will automatically disconnect the unit whenever its output voltage and/or frequency drifts outside predetermined limits (such as plus or minus 10% of the rated values). Other suitable systems to protect Polk-Burnett's system against abnormal voltages or frequencies may be accepted by Polk-Burnett.
5. Polk-Burnett will require that there be provided between the parallel generator and Polk-Burnett's system, a lockable load-break disconnect switch. For installations interconnected at greater than 600 volts, a fused cutout switch may be substituted, where practicable. The switches must be accessible to Polk-Burnett for the purpose of isolating the parallel generator's equipment from Polk-Burnett's system when necessary.
6. Polk-Burnett may require that the member discontinue parallel distributed generation operation and isolate the generating installation from Polk-Burnett's system for any of the following reasons:
 - a. To facilitate maintenance or repair of Polk-Burnett's facilities.
 - b. During system emergencies.
 - c. At such times as the member's equipment is operating in a hazardous manner, or is operating such that it adversely affects service to other members or to nearby communications systems or circuits.
7. The member shall make equipment available and permit entry upon the property by Polk-Burnett utility personnel at reasonable times for the purpose of: testing isolation and protective equipment; to evaluate the quality of power delivered to Polk-Burnett's system; and, to test to determine whether the local generating system is the source of any electric service or system problems.
8. The power output of the member must be maintained such that frequency and voltage are compatible with normal cooperative service, and do not cause that service to fall outside the prescribed limits of standard limitations.
9. The member's installation must be operated so that variations from acceptable voltage levels and other service impairing disturbances do not result in adverse effects on the service or equipment of other members, and in a manner which does not produce undesirable levels of harmonics in Polk-Burnett's power supply.
10. The member is responsible for providing protection for the installed equipment. The member's installation must comply with all applicable national, state and local codes.
11. The cooperative will require the owner of any new distributed generation project to pay for the cost of any distribution circuit, equipment, or substation upgrades that the cooperative determines are appropriate, before any new project is allowed to interconnect with the existing distribution system.

- C. Calculation of 20kW Capacity:** The electric energy produced by the Distributed Generation system must originate at the member's premises served by Polk-Burnett.

The energy production capacity of a member's owned Distributed Generation system will be deemed to be the manufacture's name plate rating. In the event a member's maximum output measured during any 15 minute period exceeds 20 kW, the facility and interconnection shall then be governed by the appropriate size generation rules.

D. Eligibility for Net Billing

1. If a member installs an Eligible Electrical Generating Facility with a generation capacity of 20 kW or less, the cooperative may, subject to the other rules and conditions of cooperative membership (including but not limited to as contained in the policy) purchase any excess energy produced by this system using net metering as described below at "avoided cost," subject to the following criteria:

2. Definitions

- a. Eligible Cooperative Member means a cooperative member that owns or operates a solar, wind, or other Eligible Electrical Generating Facility with a generation capacity of 20 kilowatts (kW) or less that is located on the member's premises and is intended primarily to offset the member's own electric requirements by being connected to the member's electrical system.
- b. Eligible Electrical Generating Facility (EEGF) means a generator of 20 kW or less powered by solar electric energy, wind, dedicated crops grown for electricity generation, anaerobic digestion of livestock or food processing waste, fuel cells or micro turbines powered by renewable fuels, or hydroelectric energy.
- c. According to the Federal Energy Regulatory Commission (Energy Policy Act of 2005 (Sec. 1251 (11))), "net metering means services to an electric consumer under which electric energy generated by that electric member from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric member during the applicable billing period." The purpose of net metering is to allow members to offset their individual loads, not become independent power producers. Therefore, generation should be properly sized to a member's load. Under Polk-Burnett policy, Net Metering means the measurement, during the applicable billing period to an eligible cooperative member, of the net amount of electricity supplied by the cooperative to the member's premises or provided to the cooperative by the member.
- d. Applicable Billing Period means the time window in which energy and demand are normally metered for cooperative members. This window in the case of smaller accounts relates to energy only and is a monthly billing period. In the case of larger accounts, the window as published in the appropriate rate schedule includes both demand and energy and has an applicable billing period defined in that rate schedule.

3. Net Billing Method

- a. The cooperative will install and maintain special metering equipment (if required) capable of measuring the flow of electricity at the same rate and ratio both into and out of the member's facility. The expense of this special metering equipment will be the responsibility of the Eligible Cooperative Member.
- b. Members that installed Distributive Generation at locations with existing off-peak metering equipment will need further analysis to determine allowable sizing of system in relationship to off-peak metering load.
- c. For EEGF's with a generation capacity of 20 kW or less, the cooperative shall measure and charge or credit for the net electricity supplied to Eligible Cooperative Members or provided by Eligible Cooperative Members as follows:

One Meter Accounts

1. The energy consumed and generated offset each other, kWh for kWh, and over-generation is credited directly to the account each month.
 - a. If the member uses more energy than they generated, they only pay for the kWh that exceeds their generation (all other charges such as facility charges, PCA, taxes, etc. still apply).
 - b. If the member generates more than they consume, their generated kWh that exceeds consumption is credited directly to the account monthly.

Parallel Heat Meter Accounts

- a. The parallel heat meter will be calculated and billed at the appropriate heat rate schedule and will NOT be subject to any offset from excess energy produced from the generating facility.
2. The rates for sales and purchases of electricity may change over time due to cooperative board approved rate changes, and sales and purchases shall be made under the rates in effect for the month that any such energy is sold or produced.

IV. Facilities Between 20 KW and 40 KW and Facilities Over 40 kW Capacity

1. Proposed facilities with capacity over 20 kW but less than or equal to 40 kW shall be paid for all of their excess energy production by the cooperative at the avoided cost rate within the stated limits of the policy.

2. Proposed facilities with capacity over 40 kW will have their power production purchased by Dairyland Power Cooperative at the avoided cost. The terms and conditions for the energy purchase shall be set by Dairyland Power. The energy producer shall also be subject to terms and conditions established by Polk-Burnett as described in this policy.

V. General Provisions

- A. The standard Distributed Generation Application Form for Polk-Burnett must be completed to the satisfaction of the cooperative.
- B. The standard Distributed Generation Interconnection Agreement for Polk-Burnett must be completed to the satisfaction of the cooperative.
- C. All Distributed Generation installation shall be inspected for code compliance and undergo commission tests including anti-islanding capabilities prior to interconnection approval.
- D. The member must pay any/all costs associated with interconnection.
- E. This policy is subject to all Federal, State and Local laws, the cooperative's articles of incorporation, bylaws, and existing policies and the terms and conditions of the cooperative's existing power supply contracts and loan agreements. To the extent any provision of this policy conflicts with those obligations, the provisions of this policy are deemed null and void.
- F. The cooperative reserves the right to establish a maximum penetration threshold for net metered Distributed Generation to limit the total kW of interconnected generation that may qualify for net metering.
- G. The member shall maintain liability insurance equal to or greater than \$300,000 (20 kW or less) or \$1 million (greater than 20 kW) per occurrence, or prove financial responsibility by another means mutually agreeable to the member and cooperative. For greater than 20 kW systems, the member shall name the cooperative as an additional insured party in the liability insurance policy.
- H. Each party to the Distributed Generation Interconnect Agreement shall indemnify, hold harmless and defend the other party, its officers, directors, employees and agents from and against any and all claims, suits, liabilities, damages, costs and expenses resulting from the installation, operation, modification, maintenance or removal of the distributed generation facility. The liability of each party shall be limited to direct actual damages, and all other damages at law or in equity shall be waived.
- I. "Avoided Cost" shall be defined as the wholesale market value of energy on a kilowatt-hour (kWh) basis. The avoided cost is published monthly by Dairyland Power Cooperative. The monthly average is compiled from the daily MISO Day-Ahead LMP on-peak and off-peak prices averaged for the month. The previous year's monthly avoided cost provided by Dairyland will be averaged over the year to calculate the true-up rate.
- J. Those members that installed distributed generation systems prior to April 28, 2014 shall be grandfathered into the buyback methodology as outlined in the previous edition of this policy until 2024, or until the existing account is transferred to a different member or until the current DG capacity is increased, whichever occurs first.

VI. Administration

It shall be the responsibility of the general manager to administer and make recommendations for any changes to this policy.

VII. Adoption

The above policy supersedes all others in these matters and shall be in force as of April 28, 2014 and thereafter until properly amended by action of the board of directors.

Edward O. Gullickson, President
April 27, 2015