POLICY NUMBER: 417 Distributed 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 Clark Electric Cooperative, and where such facilities are approved by Clark Electric Cooperative. Interconnection is subject to all other rules, conditions, practices and policies of the Cooperative in addition to those set out in this policy. In addition, 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.

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 Clark Electric Cooperative 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 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, Clark Electric Cooperative 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, Clark Electric Cooperative may limit the capacity and operating characteristics of single-phase generators in a manner consistent with Clark Electric Cooperative'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 for automatically isolating the generator from Clark Electric Cooperative's system upon loss of Clark Electric Cooperative'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 Clark Electric Cooperative's system against abnormal voltages or frequencies may be accepted by Clark Electric Cooperative.

5. Clark Electric Cooperative may require that there be provided between the parallel generator and Clark Electric Cooperative'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 Clark Electric Cooperative for the purpose of isolating the parallel generator's equipment from Clark Electric Cooperative's system when necessary.

6. Clark Electric Cooperative may require that the member discontinue parallel distributed generation operation and insolate the generating installation from Clark Electric Cooperative's system for any of the following reasons:

   a. To facilitate maintenance or repair of Clark Electric Cooperative'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 Clark Electric Cooperative utility personnel at reasonable times for the purposes of: testing isolation and protective equipment; to evaluate the quality of power delivered to Clark Electric Cooperative's system; and, to test to determine whether the local generating system is the source of any electric service or systems 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 Clark Electric Cooperative'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. The design and configuration of certain distributed generation equipment sometimes requires an isolation transformer as part of the installation for safety and protection of the distributed generation equipment.

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. Any Distributed Generation systems owned by the same individual, organization, corporation or affiliates within a one mile radius will be considered one system and the generation capacity will be aggregated Distributed Generation systems should be sized to not exceed 125% of the member's total connected load.

The energy production capacity of a member's owned Distributed Generation system will be deemed to be the manufacturer'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. **Renewable Attributes and Rights:** The Cooperative shall receive any and all renewable attributes/rights associated with its purchase using net metering of the output from renewable distributed generation facilities under Federal, State or Local laws. Notwithstanding the forgoing, at the member's option, energy can be purchased at "avoided cost" rather than on a net metered basis with and the member shall retain renewable attributes/rights (if any) under Federal, State or Local laws associated with the energy purchased which energy would otherwise have qualified for purchase using net metering under this Policy. "Avoided cost" as used in this paragraph or otherwise in this agreement will be determined monthly by Dairyland Power Cooperative as the Cooperative's wholesale power supplier.

E. **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 this 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 service to an electric consumer under which electric energy generated by that electric consumer 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 consumer during the applicable billing period." The purpose of net metering is to allow customers to offset their individual loads, not become independent power producers. Therefore, generation should be properly sized to a customer's load. Under Clark Electric Cooperative's 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. Accurate metering of the energy used for the Cooperative's electric heat and time-of-day rates is jeopardized by installing distributed generation, so Eligible Cooperative Members will not be allowed an electric heat sub-meter (unless it is wired in parallel) or to be on the time-of-day rate program.

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 "banked" for future use.

    - If the member uses more energy than they generate, they only pay for the kWh that exceeds their generation (all other charges such as facility charges, PCA, taxes, etc. still apply).

    - If the consumer generates more than they consume, their generated kWh that exceeds consumption is "banked" to offset usage in future months when the consumer generates less than they consume. For example, if the consumer over-generates this month by 100 kWh the bill calculation will bank that over-generation. Next month, the consumer uses 250 kWh more than they generate, so the bill calculation pulls 100 kWh from the banked usage (leaving banked usage at 0), only billing the member for the remaining 150 kWh (all other charges such as facility charges, PCA, taxes, etc. still apply).

    - The Cooperative will reconcile the banked kWh in March (March – February 28 look-back) of each year for any kWh remaining in the bank and pay the balance of the banked kWh at the average avoided cost rate during the previous twelve month period. The bank will then be set to 0 kWh.

Parallel Heat Meter Accounts

- The parallel heat meter will be calculated and billed at the appropriate heat rate schedule and will NOT be subject to the monthly banking provision above.

- The Cooperative will reconcile the banked kWh in March of each year for any kWh remaining in the bank (March 1 – February 28 look-back). The Cooperative will pay the balance of the banked kWh up to the kWh purchased through the electric heat meter during the look-back period and pay that balance at the electric heat rate. Any remaining balance of the banked kWh will be paid at the average avoided cost rate during the previous twelve month period. The bank will then be set to 0 kWh.

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 Over 20 kW Capacity

1. Proposed facilities with capacity over 20 kW shall be reviewed pursuant to the Cooperative's contractual obligations and/or applicable Federal, State, and Local laws and regulations. Pricing and ownership of renewable rights/attributes (if any) for energy produced and purchased will be negotiated between member and Dairyland Power Cooperative. Net metering for production from such facility will not be available.

V. General Provisions

A. The standard Distributed Generation Application Form for Clark Electric Cooperative must be completed to the satisfaction of the Cooperative.

B. The standard Distributed Generation Interconnection Agreement for Clark Electric Cooperative must be completed to the satisfaction of the Cooperative.

C. All Distributed Generation installations shall be inspected for code compliance and undergo commissioning 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. Those Members that are currently on Rate 65-66 as of the approval of this policy shall be grandfathered into the buy back methodology as outlined in the previous edition of this policy until 1/1/2033 or until the existing account is transferred to a different member or until the current DG capacity is increased, whichever occurs first.

VI. Administration

A. It shall be the responsibility of the CEO/GM 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 November 25, 2013 and thereafter until properly amended by action of the Board of Directors.

Adopted: July 27, 2012
Revised: November 25, 2013

Secretary