

**5.100 REGULATIONS PERTAINING TO CONSTRUCTION AND OPERATION OF NET METERING SYSTEMS FOR THE PURCHASE AND SALE OF ELECTRICITY FROM SMALL ELECTRICAL GENERATING SYSTEMS TO AND FROM ELECTRIC COMPANIES.**

**5.101 Purpose and Scope**

This rule establishes the standards and procedures governing application for, and issuance or revocation of, a certificate of public good for net metering systems under the provisions of 30 V.S.A §§ 219a, 219b and 248. This rule also incorporates the technical specifications related to interconnection requirements and safety standards for net metering systems

This rule is applicable to all net metered installations in Vermont, and applies to every person, firm, company, corporation and municipality engaged in the construction or operation of any net metering system which is or shall become subject to the jurisdiction of this Board.

**5.102 Definitions**

For the purposes of this rule, the following definitions apply:

- (A) "Board" means the Public Service Board of the State of Vermont.
- (B) "Conditional waiver of a criterion of 30 V.S.A. § 248" means that the requirements for the presentation of evidence under the criterion, a specific review of the project by the Board under the criterion, and the development of specific findings of facts for the criterion by the Board will be waived, unless any party, or the Board on its own motion, raises, and the Board finds that the application raises a significant issue under the criterion.
- (C) "Customer," means a retail electric consumer who uses a net metering system.
- (D) "Department" means the Department of Public Service of the State of Vermont.
- (E) "Farm system," means a facility no more than 150 kilowatts (AC) output capacity that generates electric energy on a farm principally engaged in the business of farming, as that term is defined in Regulation 1.175-3 of the Internal Revenue

code of 1986, provided that such energy is produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate pursuant to 30 V.S.A. § 8002(2). A farm system may include all meters associated with farm buildings and residences owned or occupied by the person operating the farm system, the person's family or farm employees.

- (F) "Group system" means (1) a group of customers, located within the same electric utility service territory and on properties that are physically contiguous to the property on which the net metering system is located, and has elected to combine meters as a single billing entity in order to offset that billing against that system; or (2) a municipality that has elected to combine meters on property owned by the municipality, that are located within the same municipality and electric utility service territory, as a single billing entity in order to offset that billing against the net metering system. In the case of a municipality that elects to combine meters, the net metering system must be located in the same municipality, but need not be located on property physically contiguous to the property on which the system is located.
- (G) "kWh" means kilowatt hours
- (H) "Net metering," means measuring the difference between the electricity supplied to a customer and the electricity fed back by a net metering system during the customer's billing period using a single, non-demand meter, or such other meter that would otherwise be applicable to the customer's usage but for the use of net metering. In the case of farm systems or group systems using multiple meters, the calculation will be made by converting all meters to a non-demand, non-time-of-day meter, and equalizing them to the utility's tariffed kilowatt-hour rate defined as the kWh rate component of the interconnecting utility's general service rate class that consists of two rate components: a service charge and a kWh rate.
- (I) "Net metering system," means a facility for generation of electricity that is no more than 15 kilowatts (AC) capacity; operates in parallel with facilities of the

electric distribution system; is intended primarily to offset part or all of the customer's own electricity requirements; except for group systems, is located on the customer's premises; employs a renewable energy source produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate pursuant to 30 V.S.A. § 8002(2); and is not a farm system. The Board may also allow net metering for up to fifteen systems per year that produce more than 15 kilowatts (AC) capacity, but do not produce more than 150 kilowatts of power and are not farm systems. These capacity limits apply to all non-farm net metering systems, including group net metering systems.

- (J) "Net Metering Technical Specifications" mean the technical and safety requirements for interconnection of net metering systems with electric utilities' distribution systems as attached in Appendix A (Tables 1 through 5). From time to time, the Board may, by rule amendment or order, modify or revise the specifications.
- (K) "Public Service Board Net Metering Application Form" means the current Board application form for net metering systems. From time to time the Board may modify or revise such application form.
- (L) "Peak Demand" means the highest monthly peak reported in either the electric company's FERC form 1, page 401b, column (d); or the electric company's Electric Annual Report to the Vermont Department of Public Service for the Year End, page E-8, column (b).

### **5.103 Rates, Fees and Payments**

Net metered customers shall pay the same rates, fees or other payments and be subject to the same conditions and requirements as all other purchasers from the electric company in the same rate class, except for appropriate and necessary conditions approved by the Board for the safety and reliability of the electric distribution system.

#### **5.104 Energy Measurement for Net Metering Systems**

- (A) Electric energy measurement for net metering systems other than farm or group systems shall be calculated in the following manner:
1. The electric company which serves the customer shall measure the net electricity produced or consumed during the customer's billing period, in accordance with normal metering practices.
  2. If, at the end of a billing period, the electricity supplied by the electric company exceeds the electricity generated by the customer and fed back to the electric distribution system during the billing period, then the customer shall be billed for the net electricity supplied by the electric company, net of any kWh credit accumulated with the preceding 12 months, in accordance with normal metering practices.
  3. If, at the end of a billing period, the electricity generated by the customer exceeds the electricity supplied by the electric company:
    - a. The customer shall be billed for the appropriate charges for that billing period, in accordance with Section 5.103; and
    - b. The customer shall be credited for the excess kilowatt-hours generated during the billing period, with this kilowatt-hour credit appearing on the bill for the following billing period. The credits do not result in financial payments to the customer.
  4. Any accumulated kilowatt-hour credits shall be used within 12 months from the month it was earned or shall revert to the electric company without any compensation to the net metering system customer.
  5. Any net excess generation reverting to the utility shall be considered SPEED resources pursuant to 30 V.S.A. § 8005 and Rule 4.300.
  6. For net metering systems using time-of-day, demand or other types of metering, the manner of measurement and the application of bill credits for the electric energy produced or consumed shall be substantially similar to that

specified for use with a single non-demand meter.

- (B) Electric energy measurement for farm or group systems shall be calculated in accordance with this section. If the farm or group system has multiple meters, this calculation will be made at the end of the billing period by virtually converting all meters to a non-demand, non-time-of-day meter, and equalizing them to the utility's tariffed kWh rate defined as the kWh rate component of the interconnecting utility's general service rate class that consists of two rate components: a service charge and a kWh rate.
1. Net metering customers that are farm or group systems may credit all on-site generation from the associated net metering system against all meters designated to the farm or group system.
  2. If, at the end of a billing period, the electricity generated by the farm or group system is less than the total usage of all meters included in the system during the billing period, the customer shall be credited for any accumulated kilowatt-hour credit and then billed for the net electricity supplied by the electric utility.
  3. If, at the end of a billing period, electricity generated by the farm or group system exceeds the electricity supplied by the electric company:
    - a. The customer shall be billed for the appropriate charges for that billing period, in accordance with Section 5.103; and
    - b. Excess kilowatt-hours generated during the billing period shall be added to the accumulated balance with this kilowatt-hour credit appearing on the bill for the following billing period.
  4. Any accumulated kilowatt-hour credits shall be used within 12 months from the month when it was earned or shall revert to the electric company without any compensation to the farm or group system customer.
  5. Any net excess generation reverting to the utility shall be considered a SPEED resource pursuant to 30 V.S.A. § 8005 and Rule 4.300.
- (C) In addition to any other requirements of 30 V.S.A. §§ 219a and 248 and Board

rules, before a farm or group system including more than one meter may be formed and served by an electric utility, the farm or group system shall file with the Board, with copies to the Department and the serving electric utility, the following information:

1. For farm systems: the meters to be included in the farm system, which shall be associated with farm buildings and residences owned or occupied by the person operating the farm system, the person's family or farm employees, identified by account number and location;
  2. For group systems: the meters to be included in the group system, which shall be: (a) for a non-municipal group system, within the same electric utility service territory and located on property contiguous to the property on which the generation facility is located, or (b) for a municipal group system, on property owned by a municipality that is located within the same municipality and electric utility service territory as the associated net metering system;
  3. A method for adding and removing meters included in the farm or group system;
  4. A designated person responsible for all communications from the farm or group system to the serving electric utility, for receiving and paying bills for any service provided by the serving utility for the farm or group system, and for receiving and other communications regarding the farm or group system; and
  5. A binding process for the resolution of any disputes within the farm or group system relating to net metering that does not rely on the serving electric utility, the Board or the Department.
- (D) Farm or group system customers shall, at all times, maintain a written designation to the serving electric company of a person who shall be the sole person authorized to receive and pay bills for service provided by the electric utility, and for any other communications regarding the farm or group system. However,

such designation shall not relieve the utility of the obligations to all group system members pursuant to 5.104(F) and 5.110(D)

- (E) The electric utility shall implement appropriate changes to a farm or group system within thirty days after receiving written notification from the person designated under Section 5.104(D). However, written notification of a change in the person designated under Section 5.104(D) shall be effective upon receipt by the utility. The utility shall not be liable for action based on such notification, but shall make any necessary corrections and bill adjustments to implement revised notifications.
- (F) In cases of non-payment of farm or group system bills, the electric utility may disconnect all meters associated with the group or farm system in accordance with Board Rules 3.300 and 3.400, provided that prior to disconnection, the utility shall send a copy of the disconnection notice required by those rules to all group system members.
- (G) The utility shall be responsible for issuing a single aggregate monthly bill that itemizes the monthly total consumption from each meter included in the farm or group system, including the meter physically attached to the net metered generator. Allocation of any credits for excess generation among group or farm system members shall be the responsibility of the farm or group system members.

#### **5.105 Electric Company Requirements**

- (A) Pursuant to 30 V.S.A. § 219a(h), electric companies:
  1. Shall make net metering available to any customer using a net metering system on a first-come, first-served basis until the cumulative output capacity of net metering systems equals 1.0 percent of the distribution company's peak demand during 1996 or the peak demand during the most recent full calendar year, whichever is greater. However, an electric utility and a net metering system customer may jointly petition the Board to exceed this capacity;
  2. Shall allow net metering systems to be interconnected using a kilowatt-hour meter capable of registering the flow of electricity in two directions or such other

comparably equipped meter that would otherwise be applicable to the customer's usage but for the use of net metering;

3. May, at their own expense, and with the written consent of the customer, install one or more additional meters to monitor the flow of electricity in each direction;

4. Shall charge the customer a minimum monthly fee that is the same as other customers of the electric distribution company in the same rate class, but shall not charge the customer any additional standby, capacity, interconnection, or other fee or charge related to net metering;

5. May charge reasonable fees for interconnection, establishment, special meter reading, accounting, account correcting and account maintenance of farm and group systems;

6. May charge a reasonable fee to cover the cost of electric utility improvements necessary to distribute power if the capacity of the distribution system is determined by the Board to be insufficient for the designed generation;

7. May require that all meters included within a farm or group system be read on the same billing cycle;

8. May book and defer, with carrying costs, additional incremental costs, to the extent that such costs are not already recovered directly related to implementing farm and group system net metering; and

9. Shall receive from a farm system, which is designed to produce less energy than the total annual load of the meters included in the farm system, any tradeable renewable credits for which the farm system is eligible. All other farm systems shall retain any tradeable renewable credits for which the farm system is eligible;

(B) All such requirements shall be pursuant to and governed by a tariff approved by the Board and any applicable Board rule or order, which tariffs shall be designed in a manner likely to facilitate net metering.

(C) Notwithstanding the provisions of Section 5.104, an electric utility may contract

to purchase all or a portion of the output products from a net metering system, provided:

The system obtains a certificate of public good pursuant to Section 5.107.

1. Any contracted power shall be subject to the limitations set forth in subsection (A)1 of this section.
2. Any contract shall be subject to interconnection and metering requirements in subsection (A)3 of this section and in accordance with Appendix A, the Net Metering Technical Specifications (Tables 1 through 5).
3. Any contract may permit all or a portion of the tradeable renewable energy credits for which the system is eligible to be transferred to the electric utility.

#### **5.106 Conditional Waiver of 30 V.S.A § 248(b) Criteria**

Pursuant to 30 V.S.A. § 219a(a), which provides that the Board may waive the requirements of 30 V.S.A. § 248(b) that are not applicable to net metering systems, the Board conditionally waives the following criteria:

- (A) For net metering systems using photovoltaic and fuel cell technology which are installed on or in an existing structure or new home or business, all criteria under 30 V.S.A. § 248(b), with the exception of 30 V.S.A. § 248(b)(3) (stability and reliability).
- (B) For wind turbine, biomass, hydroelectric, photovoltaic and fuel cell systems which are installed on, as, or within a new structure which is not a home or business:
  1. All criteria under 30 V.S.A. § 248(b), with the exception of 30 V.S.A. §§ 248(b)(1)(orderly development), (3)(stability and reliability), (5)(environmental considerations), and (8)(outstanding resource waters).
  2. With respect to 30 V.S.A. § 248(b)(5), all criteria and subcriteria, except for compliance with 10 V.S.A. §§ 6086(a)1(B)(waste disposal), 1(D)(floodways), 1(E)(streams), 1(F)(shorelines), 1(G)(wetlands), 4(soil erosion), 8(aesthetics, historic sites, natural areas), and 8(A)(necessary wildlife habitat).

### **5.107 Certificates of Public Good**

#### **(A) Petitions**

1. Form and Content. A petition for a certificate of public good for a net metering system shall be filed with the Board by using the Public Service Board Net Metering Application Form and shall contain all of the information required by the instructions to that form.
2. Service of Petitions. The applicant shall provide copies of the completed Public Service Board Net Metering Application Form to the persons and organizations as indicated in the application form's instructions.
3. Hearings. In cases where the Board determines that a significant issue is raised with respect to one or more of the substantive criteria applicable to the net metering system, the Board may determine to hear evidence on the issue. In any decision resulting from such a hearing, the Board need only issue findings and conclusions on the criteria concerning which it determined to hold a hearing.
4. Approval. In cases where there are no objections or requests for hearing and the Board determines that the petition does not raise a significant issue, the Board will issue a certificate of public good following the review period as specified in the application form.

#### **(B) Termination**

1. Transfer of Certificates. A certificate of public good for a net metering system is automatically transferred when the property with a net metering system is sold or otherwise conveyed. The new owner may commence net metering provided that the new owner: (1) agrees to operate and maintain the net metering system according to the terms and conditions of the certificate of public good and in compliance with this Rule 5.100 and; (2) files the Board-approved transfer form with the Board and the electric utility. The Board will provide a simplified transfer form for this purpose.
2. Revocation. The Board may, after notice and opportunity for hearing, revoke

any certificate of public good for a net metering system for the following causes:

- a. the certificate was based on false or misleading information supplied by the applicant;
- b. the system was not installed, or is not being operated, in accordance with the National Electric Code or applicable interconnection standards;
- c. the holder of the certificate has failed to comply with the conditions of approval, representations made in the application, or this rule; or
- d. other good cause exists for revocation.

#### **5.108 Liability Insurance**

Residential net metering customers shall maintain a liability insurance policy in an amount of no less than \$100,000. Non-residential net metering customers shall maintain a liability insurance policy in an amount of no less than \$300,000.

#### **5.109 Interconnection Requirements**

Net metering facilities shall be installed and operated in accordance with Appendix A, the Net Metering Technical Specifications (Tables 1 through 5). From time to time, the Board may, by order or rule amendment, modify or revise Appendix A.

#### **5.110 Disconnection of a Net Metered System**

- (A) The following procedures shall govern disconnection of a net metered system from the electrical system. These procedures apply to net metering customers only and do not supplant Board Rules 3.300 and 3.400 relating to utility disconnection in general.
- (B) Customers that initiate a permanent disconnection of their net metering systems must notify their respective electric utility, and the electric utility must notify the Board and the Vermont Department of Public Service of the disconnection.
- (C) In the event an electric utility needs to perform an emergency

disconnection of a net metering system, when continued interconnection of the system is likely to result in significant disruption of service or is likely to endanger life or property, the electric utility must notify the customer within 24 hours after the disconnection. For the purpose of Rule 5.110, the term emergency shall mean a situation in which continued interconnection of the net metering system is imminently likely to result in significant disruption of service or endanger life or property.

1. If the emergency is not caused by the net metering system, the utility shall reconnect the net metering system upon cessation of the emergency.
2. If the emergency is caused by the net metering system, the utility must communicate the nature of the problem to the customer within 5 days, and attempt to resolve the problem. If the problem has not been resolved within 30 days of an emergency disconnection, the electric utility shall file a disconnection petition with the Board.

- (D) Non-emergency disconnections shall follow the same procedure as emergency disconnections outlined above, except that the electric utility will give written notice of the disconnection no earlier than 10 days and no later than 3 working days prior to the first date on which disconnection of the net metering system may occur. Such notice shall communicate the reason for disconnection to the customer and the expected duration of the disconnection. An electric utility may obtain, at the discretion of the customer, a net metering customer's written agreement to notice requirements for non-emergency disconnections which are different from those set forth in this Rule, provided that the electric utility first advises the customer of his or her rights under this rule and informs the customer that he or she may contact the Consumer Affairs and Public Information Division of the Vermont Department of Public Service. For group systems, such agreement may be obtained from the person designated under Section 5.104(C)(4).

- (E) Customers who are involuntarily disconnected may file a complaint with the Board at any time following disconnection. Within 30 days of the date the complaint is filed, the Board may hold a hearing to determine whether the net metering system should be reconnected to the utility. In the event of the filing of such a complaint, the electric utility shall carry the burden of proof to demonstrate the reasonableness of disconnection.

**5.111 Utility Tracking of Net Metered Systems**

All electric utilities with net metered customers shall maintain current records of the cumulative amount of net metered generation within their respective service territories, pursuant to 30 V.S.A. § 219a(h)(1). Electric utilities shall also keep current records regarding the number and size of net metered systems and disconnections of net metered systems in their service areas.