

# Virginia Administrative Code

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20VAC5-315-10. Applicability and scope.

These regulations are promulgated pursuant to the provisions of § 56-594 of the Virginia Electric Utility Regulation Act (§ 56-576 et seq. of the Code of Virginia). They establish requirements intended to facilitate net energy metering for customers owning and operating, or contracting with persons to own or operate, or both, an electrical generator that uses renewable energy, as defined by § 56-576 of the Code of Virginia as its total fuel source. These regulations will standardize the interconnection requirements for such facilities and will govern the metering, billing, payment and contract requirements between net metering customers, electric distribution companies and energy service providers.

20VAC5-315-20. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Billing period" means, as to a particular customer, the time period between the two meter readings upon which the electric distribution company and the energy service provider calculate the customer's bills.

"Billing period credit" means, for a nontime-of-use net metering customer, the quantity of electricity generated and fed back into the electric grid by the customer's renewable fuel generator in excess of the electricity supplied to the customer over the billing period. For time-of-use net metering customers, billing period credits are determined separately for each time-of-use tier.

"Demand charge-based time-of-use tariff" means a retail tariff for electric supply service that has two or more time-of-use tiers for energy-based charges and an electricity supply demand (kilowatt) charge.

"Electric distribution company" means the entity that owns and/or operates the distribution facilities delivering electricity to the net metering customer's premises.

"Energy service provider (supplier)" means the entity providing electricity supply service to a net metering customer either as tariffed or competitive service.

"Excess generation" means the amount of electricity generated by the renewable fuel generator in excess of the electricity consumed by the customer over the course of the net metering period. For time-of-use net metering customers, excess generation is determined separately for each time-of-use tier.

"Net metering customer (customer)" means a customer owning and operating, or contracting with other persons to own or operate, or both, a renewable fuel generator under a net metering service arrangement.

"Net metering period" means each successive 12-month period beginning with the first meter reading date following the date of final interconnection of the renewable fuel generator with the electric distribution company's facilities.

"Net metering service" means providing retail electric service to a customer operating a renewable fuel generator and measuring the difference, over the net metering period, between electricity supplied to the customer from the electric grid and the electricity generated and fed back to the electric grid by the customer.

"Person" means any individual, corporation, partnership, association, company, business, trust, joint venture, or other private legal entity and the Commonwealth or any municipality.

"Renewable Energy Certificate (REC)" represents the renewable energy attributes associated with the production of one megawatt-hour (MWh) of electrical energy generated by a renewable fuel generator.

"Renewable fuel generator" means an electrical generating facility that:

1. Has an alternating current capacity of not more than 20 kilowatts for residential customers and not more than 500 kilowatts for nonresidential customers unless the electric distribution company has chosen a higher capacity limit for nonresidential customers in its net metering tariff;
2. Uses renewable energy, as defined by § 56-576 of the Code of Virginia, as its total fuel source;
3. The net metering customer owns and operates, or has contracted with other persons to own or operate, or both;
4. Is located on the customer's premises and is connected to the customer's wiring on the customer's side of its interconnection with the distributor;
5. Is interconnected pursuant to a net metering arrangement and operated in parallel with the electric distribution company's facilities; and
6. Is intended primarily to offset all or part of the net metering customer's own electricity requirements.

"Time-of-use net metering customer (time-of-use customer)" means a net metering customer receiving retail electricity supply service under a demand charge-based time-of-use tariff.

"Time-of-use period" means an interval of time over which the energy (kilowatt-hour) rate charged to a time-of-use customer does not change.

"Time-of-use tier (tier)" means all time-of-use periods given the same name (e.g., on-peak, off-peak, critical peak, etc.) for the purpose of time-differentiating energy (kilowatt-hour)-based charges. The rates associated with a particular tier may vary by day and by season.

#### 20VAC5-315-30. Company notification.

A. The prospective net metering customer shall submit a completed commission-approved notification form to the electric distribution company and, if different from the electric distribution company, to the energy service provider, according to the time limits in this subsection. If the prospective net metering customer has contracted with another person to own or operate, or both, the renewable fuel generator, then the notice will include detailed, current and accurate contract information for the owner or operator, or both including without limitation, the name and title of one or more individuals responsible for the interconnection and operation of the generator, a telephone number, a physical street address other than a post office box, a fax number, and an email address for each such person or persons.

1. For a renewable fuel generator with an alternating current capacity of 25 kilowatts or less, the notification form shall be submitted at least 30 days prior to the date the customer intends to interconnect his renewable fuel generator to the electric distribution company's facilities. Such net metering customer shall have all equipment necessary to complete the grid interconnection installed prior to such notification. The electric distribution company shall have 30 days from the date of notification to determine whether the requirements contained in 20VAC5-315-40 have been met. The date of notification shall be considered to be the third day following the mailing of such notification form by the prospective net metering customer.

2. For a renewable fuel generator with an alternating current capacity greater than 25 kilowatts, the notification form shall be submitted at least 60 days prior to the date the customer intends to interconnect his renewable fuel generator to the electric distribution company's facilities. Such net metering customer shall have all equipment necessary to complete the grid interconnection installed prior to such notification. Such net metering customer should contact his electric distribution company prior to making financial commitments. The electric distribution company shall have 60 days from the date of notification to determine whether the requirements contained in 20VAC5-315-40 have been met. The date of notification shall be considered to be the third day following the mailing of such notification form by the prospective net metering customer.

B. Thirty-one days after the date of notification for renewable fuel generators with a rated capacity of 25 kilowatts or less, and 61 days after the date of notification for renewable fuel generators with an alternating current capacity greater than 25 kilowatts, a net metering customer may interconnect his renewable fuel generator and begin operation of said renewable fuel generator unless the electric distribution company or the energy service provider requests a waiver of this requirement under the provisions of 20VAC5-315-80 prior to said 31st or 61st day, respectively. In cases where the electric distribution company or energy service provider requests a waiver, a copy of the request for waiver must be mailed simultaneously by the

requesting party to the net metering customer and to the commission's Division of Energy Regulation.

C. The electric distribution company shall file with the commission's Division of Energy Regulation a copy of each completed notification form within 30 days of final interconnection.

20VAC5-315-40. Conditions of interconnection.

A. A prospective net metering customer may begin operation of his renewable fuel generator on an interconnected basis when:

1. The net metering customer has properly notified both the electric distribution company and energy service provider (in accordance with 20VAC5-315-30) of his intent to interconnect.
2. If required by the electric distribution company's net metering tariff, the net metering customer has installed a lockable, electric distribution company accessible, load breaking manual disconnect switch.
3. A licensed electrician has certified, by signing the commission-approved notification form, that any required manual disconnect switch has been installed properly and that the renewable fuel generator has been installed in accordance with the manufacturer's specifications as well as all applicable provisions of the National Electrical Code.
4. The vendor has certified, by signing the commission-approved notification form, that the renewable fuel generator being installed is in compliance with the requirements established by Underwriters Laboratories or other national testing laboratories in accordance with IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, July 2003.
5. In the case of static inverter-connected renewable fuel generators with an alternating current capacity in excess of 10 kilowatts, the net metering customer has had the inverter settings inspected by the electric distribution company. The inspecting electric distribution company may impose a fee on the net metering customer of no more than \$50 for such inspection.
6. In the case of nonstatic inverter-connected renewable fuel generators, the net metering customer has interconnected according to the electric distribution company's interconnection guidelines and the electric distribution company has inspected all protective equipment settings. The inspecting electric distribution company may impose a fee on the net metering customer of no more than \$50 for such inspection.
7. In the case of renewable fuel generators with an alternating current capacity greater than 25 kilowatts, the following requirements shall be met before interconnection may occur:
  - a. Electric distribution facilities and customer impact limitations. A renewable fuel generator shall not be permitted to interconnect to distribution facilities if the interconnection would reasonably lead to damage to any of the electric distribution company's facilities or would

reasonably lead to voltage regulation or power quality problems at other customer revenue meters due to the incremental effect of the generator on the performance of the electric distribution system, unless the customer reimburses the electric distribution company for its cost to modify any facilities needed to accommodate the interconnection.

b. Secondary, service, and service entrance limitations. The capacity of the renewable fuel generator shall be less than the capacity of the electric distribution company-owned secondary, service, and service entrance cable connected to the point of interconnection, unless the customer reimburses the electric distribution company for its cost to modify any facilities needed to accommodate the interconnection.

c. Transformer loading limitations. The renewable fuel generator shall not have the ability to overload the electric distribution company transformer, or any transformer winding, beyond manufacturer or nameplate ratings, unless the customer reimburses the electric distribution company for its cost to modify any facilities needed to accommodate the interconnection.

d. Integration with electric distribution company facilities grounding. The grounding scheme of the renewable fuel generator shall comply with IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, July 2003, and shall be consistent with the grounding scheme used by the electric distribution company. If requested by a prospective net metering customer, the electric distribution company shall assist the prospective net metering customer in selecting a grounding scheme that coordinates with its distribution system.

e. Balance limitation. The renewable fuel generator shall not create a voltage imbalance of more than 3.0% at any other customer's revenue meter if the electric distribution company transformer, with the secondary connected to the point of interconnection, is a three-phase transformer, unless the customer reimburses the electric distribution company for its cost to modify any facilities needed to accommodate the interconnection.

B. A prospective net metering customer shall not be allowed to interconnect a renewable fuel generator if doing so will cause the total rated generating alternating current capacity of all interconnected renewable fuel generators within that customer's electric distribution company's Virginia service territory to exceed 1.0% of that company's Virginia peak-load forecast for the previous year. In any case where a prospective net metering customer has submitted a notification form required by 20VAC5-315-30 and that customer's interconnection would cause the total rated generating alternating current capacity of all interconnected renewable fuel generators within that electric distribution company's service territory to exceed 1.0% of that company's Virginia peak-load forecast for the previous year, the electric distribution company shall, at the time it becomes aware of the fact, send written notification to such prospective net metering customer and to the commission's Division of Energy Regulation that the interconnection is not allowed. In addition, upon request from any customer, the electric distribution company shall provide to the customer the amount of capacity still available for interconnection pursuant to § 56-594 D of the Code of Virginia.

C. Neither the electric distribution company nor the energy service provider shall impose any charges upon a net metering customer for any interconnection requirements specified by this

chapter, except as provided under subdivisions A 5 and 6 of this section, and 20VAC5-315-50 as related to additional metering.

D. The net energy metering customer shall immediately notify the electric distribution company of any changes in the ownership of, operational responsibility for, or contact information for the generator.

20VAC5-315-50. Metering, billing, payment and contract or tariff considerations.

Net metered energy shall be measured in accordance with standard metering practices by metering equipment capable of measuring (but not necessarily displaying) power flow in both directions. Each contract or tariff governing the relationship between a net metering customer, electric distribution company or energy service provider shall be identical, with respect to the rate structure, all retail rate components, and monthly charges, to the contract or tariff under which the same customer would be served if such customer was not a net metering customer with the exceptions that a residential customer-generator whose generating facility has a capacity that exceeds 10 kilowatts shall pay any applicable tariffed monthly standby charges to his supplier, and that time-of-use metering under an electricity supply service tariff having no demand charges is not permitted. Said contract or tariff shall be applicable to both the electric energy supplied to, and consumed from, the grid by that customer.

In instances where a net metering customer's metering equipment is of a type for which meter readings are made off site and where this equipment has, or will be, installed for the convenience of the electric distribution company, the electric distribution company shall provide the necessary additional metering equipment to enable net metering service at no charge to the net metering customer. In instances where a net metering customer has requested, and where the electric distribution company would not have otherwise installed, metering equipment that is intended to be read off site, the electric distribution company may charge the net metering customer its actual cost of installing any additional equipment necessary to implement net metering service. A time-of-use net metering customer shall bear the incremental metering costs associated with net metering. Any incremental metering costs associated with measuring the total output of the renewable fuel generator for the purposes of receiving renewable energy certificates shall be installed at the customer's expense unless otherwise negotiated between the customer and the REC purchaser.

A net metering customer shall receive no compensation for excess generation unless the net metering customer has entered into a power purchase agreement with its supplier.

Upon the written request of the net metering customer, the customer's supplier shall enter into a power purchase agreement for the excess generation for one or more net metering periods, as requested by the net metering customer. The written request of the net metering customer shall be submitted prior to the beginning of the first net metering period covered by the power purchase agreement. The power purchase agreement shall be consistent with this chapter. If the customer's supplier is an investor-owned electric distribution company, the supplier shall be obligated by the power purchase agreement to purchase the excess generation for the requested net metering periods at a price equal to the PJM Interconnection, L.L.C. (PJM) zonal day-ahead

annual, simple average LMP (locational marginal price) for the PJM load zone in which the electric distribution company's Virginia retail service territory resides (simple average of hourly LMPs, by tiers, for time-of-use customers), as published by the PJM Market Monitoring Unit, for the most recent calendar year ending on or before the end of each net metering period, unless the electric distribution company and the net metering customer mutually agree to a higher price or unless, after notice and opportunity for hearing, the commission establishes a different price or pricing methodology. If the Virginia retail service territory of the investor-owned electric distribution company does not reside within a PJM load zone, the power purchase agreement shall obligate the electric distribution company to purchase excess generation for the requested net metering periods at a price equal to the systemwide PJM day-ahead annual, simple average LMP (simple average of hourly LMPs, by tiers, for time-of-use customers), as published by the PJM Market Monitoring Unit, for the most recent calendar year ending on or before the end of each net metering period, unless the electric distribution company and the net metering customer mutually agree to a higher price or unless, after notice and opportunity for hearing, the commission establishes a different price or pricing methodology.

If the customer's supplier is a member-owned electric cooperative, the supplier shall be obligated by the power purchase agreement to purchase excess generation for the requested net metering periods at a price equal to the simple average (by tiers for time-of-use customers) of the electric cooperative's hourly avoidable cost of energy, including fuel, based on the energy and energy-related charges of its primary wholesale power supplier for the net metering period, unless the electric distribution company and the net metering customer mutually agree to a higher price or unless, after notice and opportunity for hearing, the commission establishes a different price or pricing methodology.

If the customer's supplier is a competitive supplier, the supplier shall be obligated by the power purchase agreement to purchase the excess generation for the requested net metering periods at a price equal to the systemwide PJM day-ahead annual, simple average LMP (simple average of hourly LMPs, by tiers, for time-of-use customers), as published by the PJM Market Monitoring Unit, for the most recent calendar year ending on or before the end of each net metering period, unless the supplier and the net metering customer mutually agree to a higher price or unless, after notice and opportunity for hearing, the commission establishes a different price or pricing methodology.

The customer's supplier shall make full payment annually to the net metering customer within 30 days following the latter of the end of the net metering period or, if applicable, the date of the PJM Market Monitoring Unit's publication of the previous calendar-year's applicable zonal or systemwide PJM day-ahead annual, simple average LMP, or hourly LMP, as appropriate. The supplier may offer the net metering customer the choice of an account credit in lieu of a direct payment. The option of a net metering customer to request payment from its supplier for excess generation and the price or pricing formula shall be clearly delineated in the net metering tariff of the electric distribution company or timely provided by the customer's competitive supplier, as applicable. A copy of such tariff, or an Internet link to such tariff, at the option of the customer, shall be provided to each customer requesting interconnection of a renewable fuel generator. A competitive supplier shall provide in its contract with the net metering customer the price or pricing formula for excess generation.

For a nontime-of-use net metering customer, in any billing period in which there is a billing period credit, the customer shall be required to pay only the nonusage sensitive charges, including any applicable standby charges, for that billing period. For a time-of-use net metering customer, in any billing period for which there are billing period credits in all tiers, the customer shall be required to pay only the demand charge or charges, nonusage sensitive charges, and any applicable standby charges, for that billing period. Any billing period credits shall be accumulated, carried forward, and applied at the first opportunity to any billing periods having positive net consumptions (by tiers, in the case of time-of-use customers). However, any accumulated billing period credits remaining unused at the end of a net metering period shall be carried forward into the next net metering period only to the extent that such accumulated billing period credits carried forward do not exceed the net metering customer's billed consumption for the current net metering period, adjusted to exclude accumulated billing period credits carried forward and applied from the previous net metering period (recognizing tiers for time-of-use customers).

A net metering customer owns any renewable energy certificates associated with the total output of its renewable fuel generator. A supplier is only obligated to purchase a net metering customer's RECs if the net metering customer has exercised its one-time option at the time of signing a power purchase agreement with its supplier to include a provision requiring the purchase by the supplier of all generated RECs over the duration of the power purchase agreement.

Payment for all whole RECs purchased by the supplier during a net metering period in accordance with the purchase power agreement shall be made at the same time as the payment for any excess generation. The supplier will post a credit to the customer's account, or the customer may elect a direct payment. Any fractional REC remaining shall not receive immediate payment, but may be carried forward to subsequent net metering periods for the duration of the power purchase agreement.

The rate of the payment by the supplier for a customer's RECs shall be the daily unweighted average of the "CR" component of Virginia Electric and Power Company's Virginia jurisdiction Rider G tariff in effect over the period for which the rate of payment for the excess generation is determined, unless the customer's supplier is not Virginia Electric and Power Company, and that supplier has an applicable Virginia retail renewable energy tariff containing a comparable REC commodity price component, in which case that price component shall be the basis of the rate of payment. The commission may, with notice and opportunity for hearing, set another rate of payment or methodology for setting the rate of payment for RECs.

To the extent that RECs are not sold to the net metering customer's supplier, they may be sold to any willing buyer at any time at a mutually agreeable price.

20VAC5-315-60. Liability insurance.

A net metering customer with a renewable fuel generator with a rated capacity not exceeding 10 kilowatts shall maintain homeowners, commercial, or other insurance providing coverage in the amount of at least \$100,000 for the liability of the insured against loss arising out of the use of a

renewable fuel generator, and for a renewable fuel generator with a rated capacity exceeding 10 kilowatts such coverage shall be in the amount of at least \$300,000. Net metering customers shall not be required to obtain liability insurance with limits higher than that which is stated in this section; nor shall such customers be required to purchase additional liability insurance where the customer's existing insurance policy provides coverage against loss arising out of the use of a renewable fuel generator by virtue of not explicitly excluding coverage for such loss.

#### 20VAC5-315-70. Additional controls and tests.

Except as provided in 20VAC5-315-40 A 5 and 6 and 20VAC5-315-50 as related to additional metering, no net metering customer shall be required to pay for additional metering, testing or controls in order to interconnect with the electric distribution company or energy service provider. However, this chapter shall not preclude a net metering customer, an electric distribution company or an energy service provider from installing additional controls or meters, or from conducting additional tests. The expenses associated with these additional meters, tests or equipment shall be borne by the party desiring the additional meters, tests or equipment.

#### 20VAC5-315-80. Request for waivers.

Any request for a waiver of any of the provisions of this chapter shall be considered by the Virginia State Corporation Commission on a case-by-case basis, and may be granted upon such terms and conditions as the commission may impose.

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