Virginia Administrative Code
Title 20. Public Utilities and Telecommunications
Agency 5. State Corporation Commission
Chapter 315. Regulations Governing Net Energy Metering

20VAC5-315-10. Applicability and Scope.

These regulations are promulgated pursuant to the provisions of §§ 56-594 and 56-594.2 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, electrical generators that use specific types of renewable energy as the 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. Agricultural net metering customers are subject to the same provisions as nonagricultural net metering customers unless otherwise specified. On or after July 1, 2019, interconnection of eligible agricultural customer-generators shall cease for member-owned electric cooperatives only, and such facilities shall interconnect solely as small agricultural generators. For member-owned electric cooperatives, agricultural net metering customers whose agricultural renewable fuel generators were interconnected before July 1, 2019, may continue to participate in net energy metering for a period not to exceed 25 years from the date of their agricultural renewable fuel generator's original interconnection.

These regulations also establish requirements for the interconnection of small agricultural generators. Small agricultural generators or agricultural renewable fuel generators may elect to interconnect as a net metering customer or as small agricultural generators pursuant to 20VAC5-315-75 , but not both. Existing eligible agricultural renewable fuel generators may elect to become small agricultural generators, but may not revert to being an agricultural renewable fuel generator after such election.

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:

"Agricultural business" means any sole proprietorship, corporation, partnership, electing small business (Subchapter S) corporation, or limited liability company engaged primarily in the production and sale of plants and animals, products collected from plants and animals, or plant and animal services that are useful to the public.

"Agricultural net metering customer" means a customer that operates an electrical generating facility consisting of one or more agricultural renewable fuel generators having an aggregate generation capacity of not more than 500 kilowatts as part of an agricultural business under a net metering service arrangement. An agricultural net metering customer may be served by multiple meters of one utility that are located at separate but contiguous

sites and that may be aggregated into one account. This account shall be served under the appropriate tariff.

"Agricultural renewable fuel generator" or "agricultural renewable fuel generating facility" means one or more electrical generators that:

1. Use as their sole energy source solar power, wind power, or aerobic or anaerobic digester gas;

2. The agricultural net metering customer owns and operates, or has contracted with other persons to own or operate, or both;

3. Are located on land owned or controlled by the agricultural business;

4. Are connected to the agricultural net metering customer's wiring on the agricultural net metering customer's side of the agricultural net metering customer's interconnection with the distributor;

5. Are interconnected and operated in parallel with an electric company's distribution facilities; and

6. Are used primarily to provide energy to metered accounts of the agricultural business.

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

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

"Contiguous sites" means a group of land parcels in which each parcel shares at least one boundary point with at least one other parcel in the group. Property whose surface is divided only by public right-of-way is considered contiguous.

"Customer" means a net metering customer or an agricultural net metering customer.

"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 or operates the distribution facilities delivering electricity to the premises of an agricultural net metering customer or a net metering customer.

"Energy service provider (supplier)" means the entity providing electricity supply service,

either tariffed or competitive service, to an agricultural net metering customer or a net metering customer.

"Excess generation" means the amount of electrical energy generated in excess of the electrical energy consumed by the agricultural net metering customer or net metering customer over the course of the net metering period. For time-of-use agricultural net metering customers or net metering customers, excess generation is determined separately for each time-of-use tier.

"Generator" or "generating facility" means an electrical generating facility consisting of one or more renewable fuel generators or one or more agricultural renewable fuel generators that meet the criteria under the definition of "net metering customer" and "agricultural net metering customer," respectively.

"Net metering customer" means a customer owning and operating, or contracting with other persons to own or operate, or both, an electrical generating facility consisting of one or more renewable fuel generators having an aggregate generation capacity of not more than 20 kilowatts for residential customers and not more than one megawatt for nonresidential customers. The generating facility shall be operated under a net metering service arrangement.

"Net metering period" means each successive 12-month period beginning with the first meter reading date following the final interconnection of an agricultural net metering customer or a net metering customer's generating facility consisting of one or more agricultural renewable fuel generators or one or more renewable fuel generators, respectively, with the electric distribution company's distribution facilities.

"Net metering service" means providing retail electric service to an agricultural net metering customer operating an agricultural renewable fuel generating facility or a net metering customer operating a renewable fuel generating facility and measuring the difference, over the net metering period, between the 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, sole proprietorship, corporation, limited liability company, partnership, association, company, business, trust, joint venture, or other private legal entity, the Commonwealth, or any city, county, town, authority, or other political subdivision of the Commonwealth.

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

"Renewable fuel generator" or "renewable fuel generating facility" means one or more electrical generators that:

1. Use renewable energy, as defined by § 56-576 of the Code of Virginia, as their total fuel source;

2. The net metering customer owns and operates, or has contracted with other persons to

own or operate, or both;

3. Are located on the net metering customer's premises and connected to the net metering customer's wiring on the net metering customer's side of its interconnection with the distributor;

4. Are interconnected pursuant to a net metering arrangement and operated in parallel with the electric distribution company's distribution facilities; and

5. Are intended primarily to offset all or part of the net metering customer's own electricity requirements. The capacity of any generating facility installed on or after July 1, 2015, shall not exceed the expected annual energy consumption based on the previous 12 months of billing history or an annualized calculation of billing history if 12 months of billing history is not available.

"Small agricultural generating facility" means an electrical generating facility that:

1. Has a capacity of not more than 1.5 megawatts and does not exceed 150% of the customer's expected annual energy consumption based on the previous 12 months of billing history or an annualized calculation of billing history if 12 months of billing history is not available;

2. Uses as its total source of fuel renewable energy;

3. Is located on the customer's premises and is interconnected with the utility's distribution system through a separate meter;

4. Is interconnected and operated in parallel with an electric utility's distribution system but not transmission facilities;

5. Is designed so that the electricity generated is expected to remain on the utility's distribution system; and

6. Is a qualifying small power production facility pursuant to the Public Utility Regulatory Policies Act of 1978 (P.L. 95-617).

"Small agricultural generator" means a customer that:

1. Is not an eligible agricultural customer-generator pursuant to § 56-594 of the Code of Virginia;

2. Operates a small agricultural generating facility as part of an agricultural business;

3. May be served by multiple meters that are located at separate but contiguous sites;

4. May aggregate the electricity consumption measured by the meters, solely for purposes of calculating 150% of the customer's expected annual energy consumption but not for billing or retail service purposes, provided that the same utility serves all of its meters;

5. Uses not more than 25% of the contiguous land owned or controlled by the agricultural business for purposes of the renewable energy generating facility; and

6. Provides the electric utility with a certification, attested under oath, as to the amount of land being used for renewable generation.

"Time-of-use customer" means an agricultural net metering customer or 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" or "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. A prospective agricultural net metering customer, a prospective net metering customer, or a prospective small agricultural generator (hereinafter referred to as "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 customer has contracted with another person to own or operate, or both, the generator or generators, 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 or generators, a telephone number, a physical street address other than a post office box, a fax number, and an email address for each such person.

1. A residential customer shall notify its supplier and receive approval to interconnect prior to installation or adding capacity to an electrical generating facility. 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 the notification form by the prospective customer.

2. A nonresidential customer shall notify its supplier and receive approval to interconnect prior to installation or adding capacity to an electrical generating facility. 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 the notification form by the prospective customer.

B. Thirty-one days after the date of notification for a residential customer, and 61 days after the date of notification for a nonresidential customer, the prospective customer may interconnect and begin operation of the generating facility 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 the 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 prospective customer and to the commission's Division of Public Utility Regulation.

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

20VAC5-315-40. Conditions of Interconnection.

A. A prospective customer may begin operation of the generating facility on an interconnected basis when:

1. The customer has properly notified both the electric distribution company and energy service provider (in accordance with 20VAC5-315-30) of the customer's intent to interconnect.

2. If required by the electric distribution company's tariff, the customer has installed a lockable, electric distribution company accessible, load breaking manual disconnect switch at each of the facility's generators.

3. The licensed electrician who installs the customer's generator or generators certifies, by signing the commission-approved notification form, that any required manual disconnect switch or switches are being installed properly and that the generator or generators have been installed in accordance with the manufacturer's specifications as well as all applicable provisions of the National Electrical Code. If the customer or licensed Virginia Class A or B general contractor installs the customer's generator or generators, the signed final electrical inspection can be used in lieu of the licensed electrician's certification.

4. The vendor certifies, by signing the commission-approved notification form that the generator or generators being installed are 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 generators with an alternating current capacity in excess of 10 kilowatts, the customer has had the inverter settings inspected by the electric distribution company. The electric distribution company may impose a fee on the customer of no more than $50 for each generator that requires this inspection.

6. In the case of nonstatic inverter-connected generators, the customer has interconnected according to the electric distribution company's interconnection guidelines and the electric distribution company has inspected all protective equipment settings. The electric distribution company may impose a fee on the customer of no more than $50 for each generator that requires this inspection.

7. The following requirements shall be met before interconnection may occur:

a. Electric distribution facilities and customer impact limitations. A customer's

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 accommodate the interconnection, including the reasonable cost of equipment required for the interconnection.

b. Secondary, service, and service entrance limitations. The capacity of the generators at any one service location 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 the reasonable cost of equipment required for the interconnection.

c. Transformer loading limitations. A customer's generator shall not have the ability to overload the electric distribution company's transformer, or any transformer winding, beyond manufacturer or nameplate ratings, unless the customer reimburses the electric distribution company for the reasonable cost of equipment required for the interconnection.

d. Integration with electric distribution company facilities grounding. The grounding scheme of each 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 customer, the electric distribution company shall assist the prospective customer in selecting a grounding scheme that coordinates with its distribution system.

e. Balance limitation. The generator or generators 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 the reasonable cost of equipment required for the interconnection.

B. A prospective customer or small agricultural generator shall not be allowed to interconnect a generator if doing so will cause the total rated generating alternating current capacity of all interconnected net metered generators, as defined in 20VAC5-315-20 , 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 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 net metered generators, as defined in 20VAC5-315-20 , 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 the prospective customer and to the commission's Division of Public Utility 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 customer for any interconnection requirements specified by this chapter, except as provided under subdivisions A 5, A 6, and A 7 of this section, 20VAC5-315-50 , and 20VAC5-315-70 as related to additional metering.

D. A customer shall immediately notify the electric distribution company of any changes in the ownership of, operational responsibility for, or contact information for any of the customer's generators.

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 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 were not an agricultural net metering customer or a net metering customer with the exceptions that a residential net metering customer or an agricultural net metering customer whose generating facility has a capacity that exceeds 10 kilowatts shall pay any applicable tariffed monthly standby charges to the 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 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 customer. In instances where a 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 customer its actual cost of installing any additional equipment necessary to implement net metering service. A time-of-use customer shall bear the incremental metering costs associated with net metering. Any incremental metering costs associated with measuring the output of any generator or generators 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. Agricultural net metering customers may be responsible for the cost of additional metering equipment necessary to accomplish account aggregation.

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

Upon the written request of the 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 customer. The written request of the 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 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 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 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 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 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 customer the choice of an account credit in lieu of a direct payment.

The option of a 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 prospective customer requesting interconnection of a generating facility. A competitive supplier shall provide in its contract with the customer the price or pricing formula for excess generation.

For a nontime-of-use 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 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 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 customer owns any renewable energy certificates associated with the total output of its generating facility. A supplier is only obligated to purchase a customer's RECs if the 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 power purchase 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 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 customer operating a generating facility with an alternating current 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 operation of the facility, and for a generating facility with an alternating current capacity exceeding 10 kilowatts such coverage shall be in the amount of at least $300,000. 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 operation of an electrical generating facility by virtue of not explicitly excluding coverage for such loss.

20VAC5-315-70. Additional Controls and Tests.

An eligible customer-generator's electrical generating system, and each electrical generating system of an eligible agricultural customer-generator, shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories. Beyond the requirements set forth in this chapter, and to insure public safety, power quality, and reliability of the supplier's electric distribution system, an eligible customer-generator or eligible agricultural customer-generator whose electrical generating system meets those standards and rules shall bear all reasonable costs of equipment required for the interconnection to the supplier's electric distribution system, including costs, if any, to (i) install additional controls and (ii) perform additional tests.

20VAC5-315-75. Interconnection of Small Agricultural Generators.

A small agricultural generator electing to interconnect pursuant to this section shall enter into a power purchase agreement with its supplier to sell all of the electricity generated from its small agricultural generating facility. The customer's supplier shall be obligated by the power purchase agreement to purchase the electricity generated at a price equal to a rate agreed upon by the parties that is not less than the utility's commission-approved avoided cost tariff for energy and capacity.

Small agricultural generators with renewable energy certificates or other environmental attributes generated by the small agricultural generating facility shall have the rights described in 20VAC5-315-50 .

Small agricultural generators shall abide by the small generator interconnection process described in 20VAC5-314 . Such customer shall be responsible for all costs associated with any interconnection or engineering studies that may be required prior to interconnection.

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.