

Minnesota Municipal Interconnection Process (M -MIP)

Rules Governing  
Interconnection of  
Distributed Energy  
Resources

**Rules**  
**Governing the Interconnection of**  
**Cogeneration and Small Power Production Facilities**  
**With**  
**Virginia Public Utilities**

## Part A. DEFINITIONS

**Subpart 1. Applicability.** For purposes of these rules, the following terms have the meanings given them below.

**Subp. 2. Average retail utility energy rate.** "Average retail utility energy rate" means, for any class of utility customer, the quotient of the total annual class revenue from sales of electricity minus the annual revenue resulting from fixed charges, divided by the annual class kilowatt-hour sales. For purposes of determining the "average retail utility energy rate," the utility may consider a retail demand rate as a fixed charge and may exclude such annual revenue from the calculation. The computation shall use data from the most recent 12- month period available.

**Subp. 3. Backup power.** "Backup power" means electric energy or capacity supplied by the utility to replace energy ordinarily generated by a qualifying facility's own generation equipment during an unscheduled outage of the facility.

**Subp. 4. Capacity.** "Capacity" means the capability to produce, transmit, or deliver electric energy and is determined using the aggregate nameplate ratings of all qualifying systems located on the customer side of the point of common coupling. The nameplate ratings of each qualifying system are the maximum alternating current capacity values at the point of DER coupling that could be measured in a 15-minute interval period.

**Subp. 5. Capacity costs.** "Capacity costs" means the costs associated with providing the capability to deliver energy. The utility's capacity costs consist of the capital costs of facilities from the utility and the utility's wholesale provider used to generate, transmit, and distribute electricity and the fixed operating and maintenance costs of these facilities.

**Subp. 6. Customer.** "Customer" means the person or entity named on the utility electric bill for the premises.

**Subp. 7. Energy.** "Energy" means electric energy, measured in kilowatt-hours.

**Subp. 8. Energy costs.** "Energy costs" means the variable costs associated with the production of electric energy. They consist of fuel costs and variable operating and maintenance expenses.

**Subp. 9. Firm power.** "Firm power" means energy delivered by the qualifying facility to the utility with at least a 65 percent on-peak capacity factor in the month. The capacity factor is based upon the qualifying facility's maximum metered capacity delivered to the utility during the on-peak hours for the month.

**Subp. 10. Governing body.** "Governing body" means the Virginia Public Utilities Commission

**Subp. 11. Interconnection costs.** "Interconnection costs" means the reasonable costs of connecting, switching, metering, transmission, distribution, safety provisions, and administrative costs incurred by the utility that are directly related to installing and maintaining the physical facilities necessary to permit interconnected operations with a qualifying facility. Costs are considered interconnection costs only to the extent that they exceed the costs the utility would incur in selling electricity to the customer as a non-generating customer.

**Subp. 12. Interruptible power.** "Interruptible power" means electric energy or capacity supplied by the utility to a customer subject to interruption under the provisions of the utility's tariff applicable to the retail class of customers to which the customer would belong irrespective of their ability to generate electricity.

**Subp. 13. Maintenance power.** "Maintenance power" means electric energy or capacity supplied by the utility during scheduled outages of a qualifying facility.

**Subp. 14. On-peak hours.** "On-peak hours" means either those hours formally designated by the utility as on-peak for ratemaking purposes or those hours for which its typical loads are at least 85 percent of its average maximum monthly loads.

**Subp. 15. Point of common coupling.** "Point of common coupling" means the point where a qualifying facility's generation system, including the point of generator output, is connected to the utility's electric power grid.

**Subp. 16. Point of distributed energy resource connection.** "Point of distributed energy resource connection" means the point where a qualifying facility's generation system, including the point of generator output, is connected to the customer's electric system and meets the current definition of IEEE 1547.

**Subp. 17. Purchase.** "Purchase" means the purchase by the utility of electric energy or capacity or both from a customer with a qualifying facility.

**Subp. 18. Qualifying facility.** "Qualifying facility" means a cogeneration or small power production facility which satisfies the conditions established in Code of Federal Regulations, title 18, part 292. The initial operation date or initial installation date of a cogeneration or small power production facility must not prevent the facility from being considered a qualifying facility for the purposes of this chapter if it otherwise satisfies all stated conditions.

**Subp. 19. Sale.** "Sale" means the sale of electric energy or capacity or both by the utility to a customer with a qualifying facility.

**Subp. 20a. Standby charge.** "Standby charge" means the charge imposed by the utility upon a customer with a qualifying facility for the recovery of costs for the provision of standby services necessary to make electricity service available to the customer.

**Subp. 20b. Standby service.** "Standby service" means supplemental or backup electric service or power provided by the utility that provides reliability to customers who generate all or a portion of their electricity needs from a qualifying facility greater than 40 kW when the customer's own ability to generate will not be sufficient to meet the customer's need while the customer remains connected to the distribution system.

**Subp. 21. Supplementary power.** "Supplementary power" means electric energy or capacity supplied by the utility which is regularly used by a customer with a qualifying facility in addition to that which the facility generates itself.

**Subp. 22. System emergency.** "System emergency" means a condition on the utility's system which is imminently likely to result in significant disruption of service to customers or to endanger life or property.

**Subp. 23. Utility.** “Utility” means Virginia Public Utilities

**Part B. SCOPE AND PURPOSE**

The purpose of these rules is to implement certain provisions of Minnesota Statutes Section 216B.164; the Public Utility Regulatory Policies Act of 1978, United States Code, title 16, §824a-3; and the Federal Energy Regulatory Commission regulations, Code of Federal Regulations, title 18, part 292. These rules shall be applied in accordance with their intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the utility’s ratepayers and the public.

**Part C. FILING REQUIREMENTS**

The utility shall file for review and approval by the governing body, a cogeneration and small power production tariff containing schedules 1 – 3 and shall thereafter file annual updates of schedules 1 and 2 in the first quarter of the year. Schedule 3’s contents shall remain the standing guidance unless and until the utility files changes.

**SCHEDULE 1.**

Schedule 1 shall contain the calculation of the average retail utility energy rates for each utility customer class.

**SCHEDULE 2.**

Schedule 2 shall contain the rates at which the utility purchases energy and capacity. If the utility has more than one wholesale supplier, schedule 2 shall contain the rates of that supplier from which purchases may first be avoided.

**SCHEDULE 3.**

Schedule 3 shall contain or indicate by reference to a publicly available document the utility's interconnection process, or “distributed generation tariff” adopted in compliance with Minnesota Statutes Section 216B.1611, subd. 3(2), including standard contract forms to be used with customers interconnecting qualifying facilities as well as general technical interconnection and interoperability requirements.

The utility shall also adopt technical specifications with utility-specific safety standards, technical requirements for distributed energy resource systems, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus.

**Part D. AVAILABILITY OF FILINGS**

All filings shall be maintained at the utility's general office and any other offices of the utility where rate tariffs are kept. The filings shall be made available for public inspection during normal business hours. The utility shall supply the current year’s distributed generation rates, interconnection procedures and application form on the utility website, if practicable, or at the utility office.

**Part E. REPORTING REQUIREMENTS**

The utility shall report to the governing body for its review and approval an annual report including information in subparts 1-3. The utility shall also comply with other federal and state reporting of distributed generation to federal and state agencies expressly required by statute.

**Subpart 1. Summary of average retail utility energy rate.** A summary of the qualifying facilities that are currently served under average retail utility energy rate.

**Subp. 2. Other qualifying facilities.** A summary of the qualifying facilities that are not currently served under average retail utility energy rate.

**Subp. 3. Wheeling.** A summary of the wheeling undertaken with respect to qualifying facilities.

## **Part F. PURCHASE AND CONTRACT REQUIREMENTS**

**Subpart 1. Requirement to purchase.** The utility shall purchase energy and capacity from any customer who offer to sell energy and capacity from a qualifying facility to the utility and agrees to the conditions in these rules.

**Subp. 2. Written contract.** A written contract shall be executed between a customer seeking to interconnect a qualifying facility and the utility.

## **Part G. EXCLUSIVE SERVICE RIGHT RETAINED**

The utility reserves its right to be the exclusive provider of electric service to all present and future customers in its service area as provided for in Minnesota Statutes, Sections 216B.40-44. The utility, therefore, refuses permission to interconnect or to continue to purchase energy produced from a facility not owned or leased at a fixed periodic payment amount by the electric utility account holder for the premise upon which the facility is located, unless that right is explicitly waived in writing by the utility for the specified facility.

## **Part H. ELECTRICAL CODE COMPLIANCE**

**Subpart 1. Compliance; standards.** The interconnection between the qualifying facility and the utility must comply with the requirements in the most recently published edition of the National Electrical Safety Code issued by the Institute of Electrical and Electronics Engineers. The interconnection is subject to subparts 2 and 3.

**Subp. 2. Interconnection.** A customer with a qualifying facility is responsible for complying with all applicable local, state, and federal codes, including building codes, the National Electrical Code (NEC), the National Electrical Safety Code (NESC), and noise and emissions standards. The utility shall require proof that the qualifying facility is in compliance with the NEC before the interconnection is made. The customer seeking to interconnect a qualifying facility must obtain installation approval from an electrical inspector recognized by the Minnesota State Board of Electricity.

**Subp. 3. Generation system.** A qualifying facility's generation system and installation must comply with the American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) standards applicable to the installation.

## **Part I. RESPONSIBILITY FOR APPARATUS**

A customer seeking to interconnect a qualifying facility, without cost to the utility, must furnish, install, operate, and maintain in good order and repair any apparatus the qualifying facility needs in order to operate in accordance with schedule 3.

## **Part J. TYPES OF POWER TO BE OFFERED; STANDBY SERVICE**

**Subpart 1. Service to be offered.** The utility shall offer maintenance, interruptible, supplementary, and backup power to a customer seeking to interconnect a qualifying facility upon request.

**Subp. 2. Standby service.** The utility shall offer a customer seeking to interconnect a qualifying facility standby power or service at the utility's applicable standby rate schedule.

## **Part K. DISCONTINUING SALES DURING EMERGENCY**

The utility may discontinue sales to a customer with an interconnected qualifying facility during a system emergency if the discontinuance and recommencement of service is not discriminatory.

## **Part L. RATES FOR UTILITY SALES TO A CUSTOMER WITH AN INTERCONNECTED QUALIFYING FACILITY**

Rates for sales to a customer with a qualifying facility are governed by the applicable tariff for the class of electric utility customers to which the customer belongs or would belong were they not a customer with an interconnected qualifying facility. Such rates are not guaranteed and may change from time to time at the discretion of the utility.

## **Part M. STANDARD RATES FOR PURCHASES FROM QUALIFYING FACILITIES**

**Subpart 1. Qualifying facilities with 100-kilowatt capacity or less.** For qualifying facilities with capacity of 100 kilowatts or less, standard purchase rates apply. The utility shall make available four types of standard rates, described in parts M, N, O, and P. A customer interconnecting a qualifying facility with a capacity of 100 kilowatts or less must choose interconnection under one of these rates, and must specify their choice in the written contract required in part V. Any net credit to a customer for their qualifying facility must, at their option, be credited to their account with the utility or returned by check or comparable electronic payment service within 15 days of the billing date. The option chosen must be specified in the written contract required in part V. A customer with an interconnected qualifying facility remains responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

**Subp. 2. Qualifying facilities over 100-kilowatt capacity.** A customer interconnecting a qualifying facility with more than 100-kilowatt capacity has the option to negotiate a contract with the utility or, if they commit to provide firm power, be compensated under standard rates.

**Subp. 3. Grid access charge.** A customer with an interconnected qualifying facility shall be assessed a monthly grid access charge to recover the fixed costs not already paid by the customer through the customer's existing billing arrangement. The additional charge shall be reasonable and appropriate for the class of customer based on the most recent cost of service study defining the grid access charge. The cost-of-service study for the grid access charge shall be made available for review by the customer of the utility upon request.

## **Part N. AVERAGE RETAIL UTILITY ENERGY RATE**

**Subpart 1. Applicability.** The average retail utility energy rate is available only to customers interconnecting qualifying facilities with capacity of less than 40 kilowatts who choose not to offer electric power for sale on either a time-of-day basis, a simultaneous purchase and sale basis or roll-over credit basis.

**Subp. 2. Method of billing.** The utility shall bill the customer with an interconnected qualifying facility for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

**Subp. 3. Additional calculations for billing.** When the energy generated by the qualifying facility exceeds that supplied by the utility to the customer at the same site during the same billing period, the utility shall compensate the customer for the excess energy at the average retail utility energy rate.

## **Part O. SIMULTANEOUS PURCHASE AND SALE BILLING RATE**

**Subpart 1. Applicability.** The simultaneous purchase and sale rate is available only to customers with qualifying facilities with capacity of less than 40 kilowatts who choose not to offer electric power for sale on average retail utility energy rate basis, time-of-day basis or roll-over credit basis.

**Subp. 2. Method of billing.** A customer with a qualifying facility must be billed for all energy and capacity they consume during a billing period according to the utility's applicable retail rate schedule.

**Subp. 3. Compensation to a customer with a qualifying facility; energy purchase.** The utility shall purchase all energy which is made available to it by the qualifying facility. At the option of the customer, the qualifying facility's entire generation may be deemed to be made available to the utility. Compensation to the customer must be the energy rate shown on schedule 2.

**Subp. 4. Compensation to a customer with a qualifying facility; capacity purchase.** If a customer with a qualifying facility provides firm power to the utility, the capacity component must be the utility's net annual avoided capacity cost per kilowatt-hour averaged over all hours shown on schedule 2, divided by the number of hours in the billing period. If the qualifying facility does not provide firm power to the utility, no capacity component may be included in the compensation paid to the customer.

## **Part P. TIME-OF-DAY PURCHASE RATES**

**Subpart 1. Applicability.** Time-of-day rates are required for customers interconnecting qualifying facilities with capacity of 40 kilowatts or more and less than or equal to 100 kilowatts, and they are optional for customers interconnecting qualifying facilities with capacity less than 40 kilowatts. Time-of-day rates are also optional for customers interconnecting qualifying facilities with capacity greater than 100 kilowatts if these qualifying facilities provide firm power.



**Subp. 2. Method of billing.** The interconnecting customer must be billed for all energy and capacity they consume during each billing period according to the utility's applicable retail rate schedule.

**Subp. 3. Compensation to qualifying facility; energy purchases.** The utility shall purchase all energy which is made available to it by the qualifying facility. Compensation to the interconnecting customer must be the energy rate shown on schedule 2.

**Subp. 4. Compensation to qualifying facility; capacity purchases.** If the qualifying facility provides firm power to the utility, the capacity component must be the capacity cost per kilowatt shown on schedule 2 divided by the number of on-peak hours in the billing period. The capacity component applies only to deliveries during on-peak hours. If the qualifying facility does not provide firm power to the utility, no capacity component may be included in the compensation paid to the interconnecting customer.

#### **Part Q. ROLL-OVER CREDIT PURCHASE RATES**

**Subpart 1. Applicability.** The roll-over credit rate is available only to interconnecting customers with qualifying facilities with capacity of less than 40 kilowatts who choose not to offer electric power for sale on average retail utility energy rate basis, time-of-day basis or simultaneous purchase and sale basis.

**Subp. 2. Method of billing.** The utility shall bill the interconnecting customer for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

**Subp. 3. Additional calculations for billing.** When the energy generated by the qualifying facility exceeds that supplied by the utility during a billing period, the utility shall apply the excess kilowatt hours as a credit to the next billing period kilowatt hour usage. Excess kilowatt hours that are not offset in the next billing period shall continue to be rolled over to the next consecutive billing period. Any excess kilowatt hours rolled over that are remaining at the end of each calendar year shall cancel with no additional compensation.

#### **Part R. CONTRACTS NEGOTIATED BY CUSTOMER**

An interconnecting customer with a qualifying facility with capacity greater than 100 kilowatts must negotiate a contract with the utility setting the applicable rates for payments to the customer of avoided capacity and energy costs.

**Subpart 1. Amount of capacity payments.** The interconnecting customer who negotiates a contract under part Q must be entitled to the full avoided capacity costs of the utility. The amount of capacity payments will be determined by the utility and the utility's wholesale power provider.

**Subp. 2. Full avoided energy costs.** The interconnecting customer who negotiates a contract under part Q must be entitled to the full avoided energy costs of the utility. The costs must be adjusted as appropriate to reflect line losses.

**Part S. WHEELING**

Interconnecting customers with qualifying facilities with capacity of 30 kilowatts or greater that are interconnected to the utility’s distribution system who choose to sell the output of the qualifying facility to any other utility, must pay any appropriate wheeling charges to the utility. Within 15 days of receiving payment from the utility ultimately receiving the qualifying facility’s output, the utility shall pay the interconnecting customer the payment less the charges it has incurred and its own reasonable wheeling costs.

**Part T. NOTIFICATION TO CUSTOMERS**

**Subpart 1. Contents of written notice.** Following each annual review and approval by the utility of the cogeneration rate tariffs the utility shall furnish in the monthly newsletter or similar mailing, written notice to each of its customers that the utility is obligated to interconnect with and purchase electricity from cogenerators and small power producers.

**Subp. 2. Availability of information.** The utility shall make available to all interested persons upon request, the interconnection process and requirements adopted by the utility, pertinent rate schedules and sample contractual agreements.

**Part U. DISPUTE RESOLUTION**

In case of a dispute between a utility and a customer interconnecting a qualifying facility or an impasse in negotiations between them, either party may petition the governing body to determine the issue.

**Part V. INTERCONNECTION CONTRACTS**

**Subpart 1. Interconnection standards.** The utility shall provide a customer applying for interconnection with a copy of, or electronic link to, the utility’s adopted interconnection process and requirements.

**Subp. 2. Existing contracts.** Any existing interconnection contract executed between the utility and a customer interconnecting a qualifying facility with capacity of less than 40 kilowatts remains in force until terminated by mutual agreement of the parties or as otherwise specified in the contract. The governing body has assumed all dispute responsibilities as listed in existing interconnection contracts. Disputes are resolved in accordance with Part T.

**Subp. 3. Renewable energy credits; ownership.** Generators own all renewable energy credits unless other ownership is expressly provided for by a contract between a generator and the utility.

**Part W. UNIFORM CONTRACT**

The uniform contract form shown in subpart 1 shall be used between the utility and a qualifying facility having less than 40 kilowatts of capacity.

**Subpart 1. Uniform Contract for Cogeneration and Small Power Production Facilities.** (See attached contract form.)

