

CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS.

Subchapter I. TRANSMISSION AND DISTRIBUTION.

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§25.211. Interconnection of On-Site Distributed Generation (DG).

- (a) **Application.** Unless the context indicates otherwise, this section and §25.212 of this title (relating to Technical Requirements for Interconnection and Parallel Operation of On-Site Distributed Generation) apply to an electric utility for all purposes except to the extent preempted by federal law. The only part of this section that applies to electric cooperatives is subsection (o) of this section.
- (b) **Purpose.** The purpose of this section includes stating the terms and conditions that govern the interconnection and parallel operation of both on-site distributed generation in order to implement Public Utility Regulatory Act (PURA) §39.101(b)(3) and a natural gas distributed generation facility in order to implement PURA §35.036. Sales of power by on-site distributed generation and natural gas distributed generation in the intrastate wholesale market are subject to §§25.191-25.203 of this title (relating to Open-Access Comparable Transmission Service for Electrical Utilities in the Electric Reliability Council of Texas).
- (c) **Definitions.** The following words and terms when used in this section and §25.212 of this title shall have the following meanings, unless the context indicates otherwise:
- (1) **Application for interconnection and parallel operation with the utility system or application** -- The standard form of application approved by the commission.
 - (2) **Company** -- An electric utility operating a distribution system.
 - (3) **Customer** -- Any entity interconnected to the company's utility system for the purpose of receiving or exporting electric power from or to the company's utility system.
 - (4) **Distributed natural gas generation facility** -- A facility installed on the customer's side of the meter that uses natural gas to generate not more than 2,000 kilowatts of electricity.
 - (5) **Facility** -- An electrical generating installation consisting of one or more on-site distributed generation units, including a distributed natural gas generation facility. The total capacity of the installation's on-site distributed generation units may exceed ten megawatts (MW); however, no more than ten MW of the installation's capacity will be interconnected at any point in time at the point of common coupling under this section.
 - (6) **Interconnection** -- The physical connection of distributed generation to the utility system in accordance with the requirements of this section so that parallel operation can occur.
 - (7) **Interconnection agreement** -- The standard form of agreement, which has been approved by the commission. The interconnection agreement sets forth the contractual conditions under which a company and a customer agree that one or more facilities may be interconnected with the company's utility system.
 - (8) **Inverter-based protective function** -- A function of an inverter system, carried out using hardware and software, that is designed to prevent unsafe operating conditions from occurring before, during, and after the interconnection of an inverter-based static power converter unit with a utility system. For purposes of this definition, unsafe operating conditions are conditions that, if left uncorrected, would result in harm to personnel, damage to equipment, unacceptable system instability or operation outside legally established parameters affecting the quality of service to other customers connected to the utility system.
 - (9) **Network service** -- Network service consists of two or more utility primary distribution feeder sources electrically tied together on the secondary (or low voltage) side to form one power source for one or more customers. The service is designed to maintain service to the customers even after the loss of one of these primary distribution feeder sources.

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- (10) **On-site distributed generation (or distributed generation)** -- An electrical generating facility located at a customer's point of delivery (point of common coupling) of ten megawatts (MW) or less and connected at a voltage less than 60 kilovolts (kV) which may be connected in parallel operation to the utility system.
 - (11) **Parallel operation** -- The operation of on-site distributed generation while the customer is connected to the company's utility system.
 - (12) **Point of common coupling** -- The point where the electrical conductors of the company utility system are connected to the customer's conductors and where any transfer of electric power between the customer and the utility system takes place, such as switchgear near the meter.
 - (13) **Pre-certified equipment** -- A specific generating and protective equipment system or systems that have been certified as meeting the applicable parts of this section relating to safety and reliability by an entity approved by the commission.
 - (14) **Pre-interconnection study** -- A study or studies that may be undertaken by a company in response to its receipt of a completed application for interconnection and parallel operation with the utility system. Pre-interconnection studies may include, but are not limited to, service studies, coordination studies and utility system impact studies.
 - (15) **Stabilized** -- A company utility system is considered stabilized when, following a disturbance, the system returns to the normal range of voltage and frequency for a duration of two minutes or a shorter time as mutually agreed to by the company and customer.
 - (16) **Tariff for interconnection and parallel operation of distributed generation** -- The commission-approved tariff for interconnection and parallel operation of distributed generation including the application for interconnection and parallel operation of distributed generation and pre-interconnection study fee schedule.
 - (17) **Unit** -- A power generator.
 - (18) **Utility system** -- A company's distribution system below 60 kV to which the generation equipment is interconnected.
- (d) **Terms of Service.**
- (1) **Distribution line charge.** No distribution line charge shall be assessed to a customer for exporting energy to the utility system.
 - (2) **Interconnection operations and maintenance costs.** No charge for operation and maintenance of a utility system's facilities shall be assessed against a customer for exporting energy to the utility system.
 - (3) **Transmission charges.** No transmission charges shall be assessed to a customer for exporting energy. For purposes of this paragraph, the term transmission charges means transmission access and line charges, transformation charges, and transmission line loss charges.
 - (4) **Contract reformation.** All interconnection contracts shall be conformed to meet the requirements of this section within 60 days of adoption.
 - (5) **Tariffs.** No later than 30 days after the effective date of this section as amended, each electric utility shall file a tariff or tariffs for interconnection and parallel operation of distributed generation in conformance with the provisions of this section. This provision does not require a utility that filed an interconnection study fee tariff prior to the effective date of this rule as amended to refile such tariff. The utility may file a new tariff or a modification of an existing tariff. Such tariffs shall ensure that back-up, supplemental, and maintenance

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power is available to all customers and customer classes that desire such service, if the electric utility sells electricity. Any modifications of existing tariffs or offerings of new tariffs relating to this subsection shall be consistent with the commission-approved form. Concurrent with the tariff filing in this section, each utility shall submit:

- (A) a schedule detailing the charges of interconnection studies and all supporting cost data for the charges;
- (B) a standard application for interconnection and parallel operation of distributed generation; and
- (C) the interconnection agreement approved by the commission.

(e) **Disconnection and reconnection.** A utility may disconnect a distributed generation unit from the utility system under the following conditions:

- (1) **Expiration or termination of interconnection agreement.** The interconnection agreement specifies the effective term and termination rights of company and customer. Upon expiration or termination of the interconnection agreement with a customer, in accordance with the terms of the agreement, the utility may disconnect customer's facilities.
- (2) **Non-compliance with the technical requirements specified in §25.212 of this title.** A utility may disconnect a distributed generation facility if the facility is not in compliance with the technical requirements specified in §25.212 of this title. Within two business days from the time the customer notifies the utility that the facility has been restored to compliance with the technical requirements of §25.212 of this title, the utility shall have an inspector verify such compliance. Upon such verification, the customer in coordination with the utility may reconnect the facility.
- (3) **System emergency.** A utility may temporarily disconnect a customer's facility without prior written notice in cases where continued interconnection will endanger persons or property. During the forced outage of a utility system, the utility shall have the right to temporarily disconnect a customer's facility to make immediate repairs on the utility's system. When possible, the utility shall provide the customer with reasonable notice and reconnect the customer as quickly as reasonably practical.
- (4) **Routine maintenance, repairs, and modifications.** A utility may disconnect a customer or a customer's facility with seven business days prior written notice of a service interruption for routine maintenance, repairs, and utility system modifications. The utility shall reconnect the customer as quickly as reasonably possible following any such service interruption.
- (5) **Lack of approved application and interconnection agreement.** In order to interconnect distributed generation to a utility system, a customer must first submit to the utility an application for interconnection and parallel operation with the utility system and execute an interconnection agreement on the forms prescribed by the commission. The utility may refuse to connect or may disconnect the customer's facility if such application has not been received and approved.

(f) **Incremental demand charges.** During the term of an interconnection agreement a utility may require that a customer disconnect its distributed generation unit and/or take it off-line as a result of utility system conditions described in subsection (e)(3) and (4) of this section. Incremental demand charges arising from disconnecting the distributed generator as directed by company during such periods shall not be assessed by company to the customer.

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- (g) **Pre-interconnection studies for non-network interconnection of distributed generation.** A utility may conduct a service study, coordination study or utility system impact study prior to interconnection of a distributed generation facility. In instances where such studies are deemed necessary, the scope of such studies shall be based on the characteristics of the particular distributed generation facility to be interconnected and the utility's system at the specific proposed location. By agreement between the utility and its customer, studies related to interconnection of on-site distributed generation on the customer's premises may be conducted by a qualified third party.
- (1) **Distributed generation facilities for which no pre-interconnection study fees may be charged.** A utility may not charge a customer a fee to conduct a pre-interconnection study for pre-certified distributed generation units up to 500 kW that export not more than 15% of the total load on a single radial feeder and contribute not more than 25% of the maximum potential short circuit current on a single radial feeder.
 - (2) **Distributed generation facilities for which pre-interconnection study fees may be charged.** Prior to the interconnection of a distributed generation facility not described in paragraph (1) of this subsection, a utility may charge a customer a fee to offset its costs incurred in the conduct of a pre-interconnection study. In those instances where a utility conducts an interconnection study the following shall apply:
 - (A) The conduct of such pre-interconnection study shall take no more than four weeks;
 - (B) A utility shall prepare written reports of the study findings and make them available to the customer;
 - (C) The study shall consider both the costs incurred and the benefits realized as a result of the interconnection of distributed generation to the company's utility system; and
 - (D) The customer shall receive an estimate of the study cost before the utility initiates the study.
- (h) **Network interconnection of distributed generation.** Certain aspects of secondary network systems create technical difficulties that may make interconnection more costly to implement. In instances where customers request interconnection to a secondary network system, the utility and the customer shall use best reasonable efforts to complete the interconnection and the utility shall utilize the following guidelines:
- (1) A utility shall approve applications for distributed generation facilities that use inverter-based protective functions unless total distributed generation (including the new facility) on affected feeders represents more than 25% of the total load of the secondary network under consideration.
 - (2) A utility shall approve applications for other on-site generation facilities whose total generation is less than the local customer's load unless total distributed generation (including the new facility) on affected feeders represents more than 25% of the total load of the secondary network under consideration.
 - (3) A utility may postpone processing an application for an individual distributed generation facility under this section if the total existing distributed generation on the targeted feeder represents more than 25% of the total load of the secondary network under consideration. If that is the case, the utility should conduct interconnection and network studies to determine whether, and in what amount, additional distributed generation facilities can be safely added to the feeder or accommodated in some other fashion. These studies should be completed within six weeks, and application processing should then resume.

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- (4) A utility may reject applications for a distributed generation facility under this section if the utility can demonstrate specific reliability or safety reasons why the distributed generation should not be interconnected at the requested site. However, in such cases the utility shall work with the customer to attempt to resolve such problems to their mutual satisfaction.
 - (5) A utility shall make all reasonable efforts to seek methods to safely and reliably interconnect distributed generation facilities that will export power. This may include switching service to a radial feed if practical and if acceptable to the customer.
- (i) **Pre-Interconnection studies for network interconnection of distributed generation.** Prior to charging a pre-interconnection study fee for a network interconnection of distributed generation, a utility shall first advise the customer of the potential problems associated with interconnection of distributed generation with its network system. For potential interconnections to network systems there shall be no pre-interconnection study fee assessed for a facility with inverter systems under 20 kW. For all other facilities the utility may charge the customer a fee to offset its costs incurred in the conduct of the pre-interconnection study. In those instances where a utility conducts an interconnection study, the following shall apply:
- (1) The conduct of such pre-interconnection studies shall take no more than four weeks;
 - (2) A utility shall prepare written reports of the study findings and make them available to the customer;
 - (3) The studies shall consider both the costs incurred and the benefits realized as a result of the interconnection of distributed generation to the utility's system; and
 - (4) The customer shall receive an estimate of the study cost before the utility initiates the study.
- (j) **Communications concerning proposed distributed generation projects.** In the course of processing applications for interconnection and parallel operation and in the conduct of pre-interconnection studies, customers shall provide the utility detailed information concerning proposed distributed generation facilities. Such communications concerning the nature of proposed distributed generation facilities shall be made subject to the terms of §25.84 of this title (relating to Annual Reporting of Affiliate Transactions for Electric Utilities), §25.272 of this title (relating to Code of Conduct for Electric Utilities and their Affiliates), and §25.273 of this title (relating to Contracts between Electric Utilities and their Competitive Affiliates). A utility and its affiliates shall not use such knowledge of proposed distributed generation projects submitted to it for interconnection or study to prepare competing proposals to the customer that offer either discounted rates in return for not installing the distributed generation, or offer competing distributed generation projects.
- (k) **Equipment pre-certification.**
- (1) **Entities performing pre-certification.** The commission may approve one or more entities that shall pre-certify equipment as defined pursuant to this section.
 - (2) **Standards for entities performing pre-certification.** Testing organizations and/or facilities capable of analyzing the function, control, and protective systems of distributed generation units may request to be certified as testing organizations.
 - (3) **Effect of pre-certification.** Distributed generation units which are certified to be in compliance by an approved testing facility or organization as described in this subsection shall be installed on a company utility system in accordance with an approved interconnection control and protection scheme without further review of their design by the utility.

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- (l) **Designation of utility contact persons for matters relating to distributed generation interconnection.**
- (1) Each electric utility shall designate a person or persons who will serve as the utility's contact for all matters related to distributed generation interconnection.
 - (2) Each electric utility shall identify to the commission its distributed generation contact person.
 - (3) Each electric utility shall provide convenient access through its internet web site to the names, telephone numbers, mailing addresses and electronic mail addresses for its distributed generation contact person.
- (m) **Time periods for processing applications for interconnection with the utility system.** In order to apply for interconnection the customer shall provide the utility a completed application for interconnection and parallel operation with the utility system. The interconnection of distributed generation to the utility system shall take place within the following schedule:
- (1) For a facility with pre-certified equipment, interconnection shall take place within four weeks of the utility's receipt of a completed interconnection application.
 - (2) For other facilities, interconnection shall take place within six weeks of the utility's receipt of a completed application.
 - (3) If interconnection of a particular facility will require substantial capital upgrades to the utility system, the company shall provide the customer an estimate of the schedule and customer's cost for the upgrade. If the customer desires to proceed with the upgrade, the customer and the company will enter into a contract for the completion of the upgrade. The interconnection shall take place no later than two weeks following the completion of such upgrades. The utility shall employ best reasonable efforts to complete such system upgrades in the shortest time reasonably practical.
 - (4) A utility shall use best reasonable efforts to interconnect facilities within the time frames described in this subsection. If in a particular instance, a utility determines that it cannot interconnect a facility within the time frames stated in this subsection, it will notify the applicant in writing of that fact. The notification will identify the reason or reasons interconnection could not be performed in accordance with the schedule and provide an estimated date for interconnection.
 - (5) All applications for interconnection and parallel operation of distributed generation shall be processed by the utility in a non-discriminatory manner. Applications will be processed in the order that they are received. It is recognized that certain applications may require minor modifications while they are being reviewed by the utility. Such minor modifications to a pending application shall not require that it be considered incomplete and treated as a new or separate application.
- (n) **Reporting requirements.** Each electric utility shall maintain records concerning applications received for interconnection and parallel operation of distributed generation. Such records will include the name of the applicant, the business address of the applicant, and the location of the proposed facility by county, the capacity rating of the facility in kilowatts, whether the facility is a renewable energy resource as defined in §25.173 of this title (relating to Goal for Renewable Energy), the date each application is received, documents generated in the course of processing each application, correspondence regarding each application, and the final disposition of each application. The owner of a distributed generation facility that is interconnected under this section shall report to the utility any change in ownership of the facility and the cessation of operations of a facility within 14 days of such

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change. By March 30 of each year, every electric utility shall file with the commission a distributed generation interconnection report for the preceding calendar year that identifies each distributed generation facility interconnected with the utility's distribution system. The report shall list the new distributed generation facilities interconnected with the system since the previous year's report, any change in ownership or the cessation of operations of any distributed generation that has been reported to the electric utility and not included in the previous report, the capacity of each facility and whether it is a renewable energy resource, and the feeder or other point on the company's utility system where the facility is connected. The annual report shall also identify all applications for interconnection received during the previous one-year period, and the disposition of such applications.

(o) **Distributed natural gas generation facility.** This subsection, as well as the other subsections of this section, apply to a distributed natural gas generation facility. This subsection does not require an electric cooperative to transmit electricity to a retail point of delivery in the certificated area of the electric cooperative if the electric cooperative has not adopted customer choice. If there is a conflict between this subsection and another subsection of this section, this subsection controls.

(1) **Transmission.**

(A) **Electric utilities.** At the request of the owner or operator of a distributed natural gas generation facility, an electric utility shall allow the owner or operator of the facility to interconnect with and use transmission and distribution facilities to transmit electricity to another entity that is acceptable to the owner or operator in accordance with this section and the commission's rules for open-access comparable transmission service for electric utilities in ERCOT, §§25.191 - 25.203 of this title, or a tariff approved by the Federal Energy Regulatory Commission (FERC).

(B) **Electric cooperatives.** At the request of the owner or operator of a distributed natural gas generation facility, an electric cooperative shall allow the owner or operator of the facility to use transmission and distribution facilities to transmit the electric power to another entity that is acceptable to the owner or operator in accordance with the commission's rules for open-access comparable transmission service for electric utilities in ERCOT, §§25.191 - 25.203 of this title, or a tariff approved by FERC.

(2) **Interconnection Disputes.** If an electric utility or electric cooperative seeks to recover from the owner or operator of a distributed natural gas generation facility an amount that exceeds the amount in the estimate provided under PURA §35.036(e) by more than 5%, the commission shall resolve the dispute at the request of the owner or operator of the facility.