

**199—45.11(476) Level 4 review.** A utility shall use the following Level 4 study review procedures for an interconnection request that meets the criteria in subrule 45.7(4).

**45.11(1)** The applicant submits an interconnection request using the Levels 2 to 4 Interconnection Request Application form along with the Level 4 application fee.

**45.11(2)** Within ten business days after receipt of an interconnection request, the utility shall notify the applicant whether the request is complete. When the interconnection request is not complete, the utility shall provide the applicant with a written list detailing the information required to complete the interconnection request. The applicant has ten business days to provide the required information or the interconnection request is considered withdrawn. The parties may agree to extend the time for receipt of the additional information. The interconnection request is deemed complete when the required information has been provided by the applicant, or the parties have agreed that the applicant may provide additional information at a later time.

**45.11(3)** After an interconnection request is deemed complete, the utility shall assign a review order position to it based upon the date the interconnection request is determined to be complete. When assigning a review order position, a utility may consider whether there are any other interconnection projects on the same distribution circuit. If there are other interconnection projects on the same distribution circuit, the utility may consider them together. If a utility assigns a review order position based on the existence of interconnection projects on the same distribution circuit, the utility shall notify the applicant of that fact when the utility assigns the review order position. The review order position of an interconnection request is used to determine the cost responsibility for the facilities necessary to accommodate the interconnection. The utility shall notify the applicant as to the applicant's position in the review order. If the interconnection request is subsequently amended, the applicant shall receive a new review order position based on the date that the interconnection request was amended.

**45.11(4)** Level 4 study review procedures. After the interconnection request has been assigned to the review order, a Level 4 study review shall be conducted:

*a.* Waiver or combination of standard Level 4 study review procedures. By mutual agreement of the parties in writing, the scoping meeting, feasibility study, system impact study, or facilities study in paragraph 45.11(4)“*b*” may be waived or combined with other studies. Otherwise, the standard Level 4 study review procedures in paragraph 45.11(4)“*b*” shall apply.

*b.* Standard Level 4 study review procedures include:

(1) Scoping meeting. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“*a*,” a scoping meeting shall be held with the applicant on a mutually agreed-upon date and time, after the utility has notified the applicant that the Level 4 interconnection request is deemed complete, or after the applicant has requested that the applicant's interconnection request proceed under Level 4 review after failing the requirements of a Level 1, Level 2, or Level 3 review. The purpose of the meeting is to review the interconnection request, any existing studies relevant to the interconnection request, and the results of any Level 1, Level 2, or Level 3 screening criteria.

(2) Feasibility study. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“*a*,” an interconnection feasibility study (subrule 45.11(5)) shall be performed.

1. The utility shall provide the applicant a copy of the Interconnection Feasibility Study Agreement or a mutually agreed-upon alternative form, plus a description of the study and a nonbinding estimate of the cost to perform the study.

2. The utility shall provide the study agreement and information no later than ten business days after the following have occurred, as applicable:

- Receipt of a complete interconnection request; and
- The scoping meeting (if held).

3. If the applicant does not sign and return the study agreement with payment of the estimated costs of the study within 15 business days, the application shall be deemed withdrawn.

(3) System impact study. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“*a*,” an interconnection system impact study (subrule 45.11(6)) shall be performed.

1. The utility shall provide the applicant a copy of the Interconnection System Impact Study Agreement or a mutually agreed-upon alternative form, plus an outline of the scope of the study and a nonbinding estimate of the cost to perform the study.

2. The utility shall provide the study agreement and information no later than ten business days after the following have occurred, as applicable:

- Receipt of a complete interconnection request;
- The scoping meeting (if held); and
- Transmittal of the interconnection feasibility study (if performed).

3. If the applicant does not sign and return the study agreement with payment of the estimated costs of the study within 15 business days, the application shall be deemed withdrawn.

(4) Facilities study. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“a,” an interconnection facilities study (subrule 45.11(7)) shall be performed.

1. The utility shall provide the applicant a copy of the Interconnection Facilities Study Agreement or a mutually agreed-upon alternative form, plus an outline of the scope of the study and a nonbinding estimate of the cost to perform the study.

2. The utility shall provide the study agreement and information no later than ten business days after the following have occurred, as applicable:

- Receipt of a complete interconnection request;
- The scoping meeting (if held);
- Transmittal of the interconnection feasibility study (if performed); and
- Transmittal of the interconnection system impact study (if performed).

3. If the applicant does not sign and return the study agreement with payment of the estimated costs of the study within 15 business days, the application is deemed withdrawn.

**45.11(5)** Interconnection feasibility study.

a. Unless waived or combined with other studies by agreement of the parties pursuant to paragraph 45.11(4)“a,” the interconnection feasibility study shall include any necessary analyses for the purpose of identifying potential adverse system impacts to the utility’s electric system that would result from the interconnection from among the following:

(1) Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

(2) Initial identification of any thermal overload or voltage limit violations resulting from the interconnection; and

(3) Initial review of grounding requirements and system protection.

b. Before performing the study, the utility shall provide the applicant a description of the study and a nonbinding estimate of the cost to perform the study.

c. If an applicant requests that the interconnection feasibility study evaluate multiple potential points of interconnection, additional evaluations may be required that will be paid for by the applicant.

d. An interconnection system impact study is not required when the interconnection feasibility study concludes that there is no adverse system impact, or when the study identifies an adverse system impact, but the utility is able to identify a remedy without the need for an interconnection system impact study.

e. Either party can require that the Interconnection Feasibility Study Agreement be used. However, if both parties agree, an alternative form can be used.

**45.11(6)** Interconnection system impact study. An interconnection system impact study evaluates the impact of the proposed interconnection on both the safety and reliability of the utility’s electric distribution system. The interconnection impact study identifies and details the system impacts that interconnecting the distributed generation facility to the utility’s electric system has if there are no system modifications. The interconnection system impact study focuses on the potential or actual adverse system impacts identified in the interconnection feasibility study, including those that were identified in the scoping meeting. The interconnection system impact study shall consider all other distributed generation facilities that, on the date the interconnection system impact study is commenced, are directly interconnected with the utility’s system, have a pending higher review order position to interconnect to the electric distribution system, or have signed an interconnection agreement. The utility shall coordinate with any affected system owners

regarding potential impacts to affected systems in a timely manner and include the results of such studies along with the system impacts study.

*a.* Unless waived or combined with other studies by agreement of the parties pursuant to paragraph 45.11(4)“*a,*” an interconnection system impact study shall be performed when either a potential adverse system impact is identified in the interconnection feasibility study, or an interconnection feasibility study has not been performed. Before performing the interconnection feasibility study, the utility shall provide the applicant an outline of the scope of the study and a nonbinding estimate of the cost to perform the study. The interconnection system impact study shall include any pertinent elements from among the following:

- (1) A load flow study;
- (2) Identification of affected systems and any subsequent affected system study;
- (3) An analysis of equipment interrupting ratings;
- (4) A protection coordination study;
- (5) Voltage drop and flicker studies;
- (6) Protection and set point coordination studies;
- (7) Grounding reviews; and
- (8) Impact on system operation.

*b.* An interconnection system impact study shall consider any necessary criteria from among the following:

- (1) A short-circuit analysis;
- (2) A stability analysis;
- (3) Alternatives for mitigating adverse system impacts on affected systems;
- (4) Voltage drop and flicker studies;
- (5) Protection and set point coordination studies;
- (6) Grounding reviews; and
- (7) Results from the affected system study.

*c.* The final interconnection system impact study shall provide the following:

- (1) The underlying assumptions of the study;
- (2) The results of the analyses;
- (3) A list of any potential impediments to providing the requested interconnection service;
- (4) Required distribution upgrades; and
- (5) A nonbinding estimate of cost and time to construct any required distribution upgrades.

*d.* Either party can require that the Interconnection System Impact Study Agreement be used. However, if both parties agree, an alternative form can be used.

**45.11(7)** Interconnection facilities study. Unless waived or combined with other studies by agreement of the parties pursuant to paragraph 45.11(4)“*a,*” an interconnection facilities study shall be performed as follows:

*a.* Before performing the interconnection facilities study, the utility shall provide the applicant an outline of the scope of the study and a nonbinding estimate of the cost to perform the study.

*b.* The interconnection facilities study shall estimate the cost of the equipment, engineering, procurement and construction work, including overheads, needed to implement the conclusions of the interconnection feasibility study and the interconnection system impact study. The interconnection facilities study shall identify:

- (1) The electrical switching configuration of the equipment, including transformer, switchgear, meters and other station equipment;
- (2) The nature and estimated cost of the utility’s interconnection facilities and distribution upgrades necessary to accomplish the interconnection; and
- (3) An estimate for the time required to complete the construction and installation of the interconnection facilities and distribution upgrades.

*c.* The utility may agree to permit an applicant to arrange separately for a third party to design and construct the required interconnection facilities. In such a case, when the applicant agrees to separately arrange for design and construction, and to comply with security and confidentiality requirements, the

utility shall make all relevant information and required specifications available to the applicant to permit the applicant to obtain an independent design and cost estimate for the facilities, which shall be built in accordance with the utility's specifications.

*d.* Upon completion of the interconnection facilities study, and after the applicant agrees to pay for the interconnection facilities and distribution upgrades identified in the interconnection facilities study, the utility shall provide the applicant with the Levels 2 to 4 Distributed Generation Interconnection Agreement within three business days of the date the utility makes its determination.

*e.* In the event that distribution upgrades are identified in the interconnection system impact study that shall be added only in the event that customers with higher review order positions not yet interconnected eventually complete and interconnect the customers' generation facilities, the applicant may elect to interconnect without paying the estimate for such upgrades at the time of the interconnection, provided that the applicant pays for such upgrades prior to commencement of construction of such upgrades to be completed by the time the customer with higher review order position is ready to interconnect. If the applicant does not pay for such upgrades at that time, the utility shall require the applicant to immediately disconnect the applicant's distributed generation facility to accommodate the customer with higher review order position.

*f.* Either party can require that the Interconnection Facilities Study Agreement be used. However, if both parties agree, an alternative form can be used.

**45.11(8)** When a utility determines, as a result of the studies conducted under a Level 4 review, that it is appropriate to interconnect the distributed generation facility, the utility shall provide the applicant with the Levels 2 to 4 Distributed Generation Interconnection Agreement. If the interconnection request is denied, the utility shall provide the applicant with a written explanation as to the utility's reasons for denying interconnection. If denied, the interconnection request does not retain its position in the review order.

**45.11(9)** Within 30 business days after receipt of the Levels 2 to 4 Distributed Generation Interconnection Agreement, the applicant shall provide all necessary information required of the applicant by the agreement, and the utility shall develop all other information required of the utility by the agreement. After completing the agreement with the additional information, the utility will transmit the completed agreement to the applicant. Within 30 business days after receipt of the completed agreement, the applicant shall sign and return the completed agreement to the utility. If the applicant does not sign and return the agreement within 30 business days after receipt, the interconnection request shall be deemed withdrawn, unless the applicant requests in writing to have the deadline extended by no more than 15 business days, prior to the expiration of the 30-business-day period. The initial request for extension will not be denied by the utility. If the applicant does not sign and return the agreement after the 15-business-day extension, the interconnection request shall be deemed withdrawn. If withdrawn, the interconnection request does not retain its position in the review order. When construction is required, the interconnection of the distributed generation facility shall proceed according to milestones agreed to by the parties in the Levels 2 to 4 Distributed Generation Interconnection Agreement.

**45.11(10)** The Levels 2 to 4 Distributed Generation Interconnection Agreement is not final until:

*a.* The requirements of the agreement, including the provision of all necessary documents, are satisfied;

*b.* The distributed generation facility is approved by electric code officials with jurisdiction over the interconnection;

*c.* The applicant provides the Certificate of Completion form to the utility. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and

*d.* The witness test has either been successfully completed or waived by the utility in accordance with Article 2.1.1 of the Levels 2 to 4 Distributed Generation Interconnection Agreement.

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