

Oregon Small Generator Interconnection PUC Staff's Proposed Rules

860-082-0005

Scope and Applicability

(1) The Oregon Small Generator Interconnection Rules set forth in OAR 860-082-0005 through 860-082-0080 (the OSGIR) regulate the interconnection of a Small Generator Facility to the Electric Transmission and Distribution (T&D) System of an Electric Distribution Company (EDC) provided that:

(a) The Small Generation Facility has an Electric Nameplate Capacity rating equal to or less than 10MW;

(b) The Small Generating Facility is requesting interconnection to an EDC; and

(c) The Small Generating Facility is not producing electricity for resale to a customer other than the interconnected EDC.

(2) The OSGIR do not regulate or address:

(a) An Electric Service Agreement for the provision of electric utility service to the Interconnection Customer by the EDC;

(b) A Power Purchase Agreement for the purchase of power from the Interconnection Customer by the EDC; or

(c) An Interconnection Agreement that provides for transmission or distribution service to the interconnection customer by the EDC.

Each of these issues will be addressed, if at all, through separate procedures and agreements. The Interconnection Customer is responsible for separately making all necessary arrangements and agreements with the EDC if power is to be exported past the point of interconnection.

(3) Waiver: For good cause shown, the Commission may deviate from or waive any of the provisions contained in the OSGIR and Interconnection Agreements entered into pursuant to these rules. The parties may also agree to mutually waive a section of said rules or an Interconnection Agreement entered in to pursuant to these Rules without the Commission's permission where said Rule or Agreement expressly so provides.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0010

Definitions

As used in 860-082-0010 through 860-082-0080:

(1) "Adverse System Impact" means a negative effect that may compromise the safety and reliability of the EDC's T&D System or an Affected System.

(2) "Affected System" means a T&D System, not owned or operated by the EDC, which may experience an Adverse System Impact from the proposed interconnection.

(3) "Affected System Owner" means the entity that owns an Affected System.

(4) "Applicant" means an entity, including another EDC, which has submitted an Application to an EDC to interconnect a Small Generator Facility to the EDC's T&D System.

(5) "Application" means a request to interconnect a Small Generator Facility with an EDC's T&D System submitted on a form provided on the Commission's website as either Form 1 or Form 2, depending on the specifications of the Small Generator Facility proposed.

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(6) "Area Network" means a type of T&D System served by multiple transformers interconnected in an electrical network circuit, which is generally used in large metropolitan areas that are densely populated, in order to provide high reliability of service.

(7) "Certificate of Completion" means a form of certificate signed by the Applicant and attesting that the Small Generator Facility is complete; meets the applicable requirements of the OSGIR; and has been inspected, tested and certified as physically ready for operation. A model form of a Certificate of Completion is provided by the Commission on its website as Form 3.

(8) "Electric Nameplate Capacity" means the net maximum electric output capability measured in watts, kilowatts or megawatts of a Small Generator Facility as designated by the manufacturer.

(9) "Electric Distribution Company" or "EDC" means a public utility providing electric service subject to the jurisdiction of the Public Utility Commission of Oregon.

(10) "Electric Transmission and Distribution System or "T&D System" means the facilities and equipment used to transmit electricity to ultimate usage points.

(11) "Fault Condition" means an event where one or more electrical conductors contact ground or each other, or both. Types of faults include phase to ground, double-phase to ground, three-phase to ground, phase-to-phase, and three-phase.

(12) "Fault Current" means the electrical current that flows through a circuit during a fault condition.

(13) "Field Tested Equipment" means Interconnection Equipment that is identical to equipment that was approved for interconnection under the Level 4 study review of this procedure and has successfully completed a Witness Test within 36 months from the date of the submission of the current application. For equipment to gain Field Tested Equipment status, the Applicant must provide all the documentation of the prior Level 4 study, review and approval, as well as any interconnection studies, and the Certificates of Completion.

(14) "IEEE 1547" means the Standard 1547 published in 2003 by the Institute of Electrical and Electronics Engineers (IEEE) entitled "Interconnecting Distributed Resources with Electric Power Systems."

(15) "IEEE 1547.1" means the Standard 1547.1 published in 2005 by the Institute of Electrical and Electronics Engineers (IEEE) entitled "Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems."

(16) "Interconnection Agreement" means an agreement between the Applicant or Interconnection Customer and the EDC that authorizes the connection of the Small Generator Facility to the EDC's T&D System.

(17) "Interconnection Customer" means an entity with one or more Small Generator Facilities interconnected to an EDC in accordance with the OSGIR.

(18) "Interconnection Equipment" means a group of components or an integrated system provided by the Interconnection Customer to connect a Small Generator Facility to an EDC's T&D System. Such equipment includes all interface equipment including switchgear, protective devices, inverters, or other interface devices. Interconnection Equipment may be installed as part of an integrated equipment package that includes a generator or other electric source.

(19) "Interconnection Facilities" means the facilities and equipment required by the EDC to accommodate the interconnection of a Small Generator Facility to the EDC's T&D System. Interconnection Facilities are facilities used exclusively to interconnect a specific Small Generator Facility, and do not include System Upgrades that may benefit the EDC, other customers (including other Interconnection Customers) or an Affected System Owner.

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(20) "Interconnection Facilities Study" means a detailed study conducted by the EDC or a third-party consultant to identify a list of Interconnection Facilities and System Upgrades required to address Adverse System Impacts (as identified in the Interconnection System Impact Study), the cost of those facilities, and the time required to interconnect the Small Generator Facility with the EDC's T&D System.

(21) "Interconnection Facilities Study Agreement" means the form of agreement that provides a detailed scope and timeline for the Interconnection Facilities Study and a good faith, non-binding estimate of the costs to perform the study. The Interconnection Facilities Study Agreement is submitted on a form provided on the Commission's website as Form 6.

(22) "Interconnection Feasibility Study" means a preliminary evaluation of the system impact and cost of interconnecting the Small Generator Facility to the EDC's T&D System.

(23) "Interconnection Feasibility Study Agreement" means the form of agreement that provides a scope, timeline and a good faith, non-binding estimate of the costs for the EDC to conduct an Interconnection Feasibility Study for the Applicant. The Interconnection Feasibility Study Agreement is submitted on a form provided on the Commission's website as Form 7.

(24) "Interconnection System Impact Study" means an engineering study performed by the EDC that evaluates the impact of the proposed interconnection on the safety and reliability of the T&D System. The study focuses on the Adverse System Impacts identified in the Interconnection Feasibility Study and potential impacts including, but not limited to, those identified in the Scoping Meeting.

(25) "Interconnection System Impact Study Agreement" means the form of agreement that provides a statement of scope, timeline and a good faith, non-binding estimate of cost to conduct an Interconnection System Impact Study. The Interconnection System Impact Study Agreement is submitted on a form provided on the Commission's website as Form 8.

(26) "Lab Tested Equipment" means the Interconnection Equipment which has been tested by the original equipment manufacturer in accordance IEEE 1547.1 and found to be in compliance with the appropriate codes and standards referenced therein and is labeled and listed by a Nationally Recognized Testing Laboratory (NRTL). For interconnection equipment to gain Lab Tested Equipment status, its use must fall within the use or uses for which the interconnection equipment is labeled and listed by the NRTL; and the generator or other electric source being utilized must be compatible with the interconnection equipment and consistent with the testing and listing specified for the type of interconnection equipment.

(27) "Line Section" means that portion of an EDC's distribution system connected to an Interconnection Customer, bounded by automatic sectionalizing devices or the end of the distribution line.

(28) "Minor Equipment Modification" means minor changes to the proposed Small Generator Facility or Interconnection Equipment that would not affect the application of the screening criteria in Levels 1, 2, or 3 and, in the EDC's opinion, do not have a material impact on safety or reliability of the T&D System or Affected Systems.

(29) "Nationally Recognized Testing Laboratory" or "NRTL" means a qualified private organization that performs independent safety testing and product certification. Each NRTL must meet the requirements as set forth by OSHA for a NRTL program.

(30) "Net Metering Facility" means a Small Generator Facility as defined in ORS 757.300(1)(d).

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(31) "Parallel Operation" or "Parallel" means a Small Generator Facility is connected electrically to a T&D System and the potential exists for electricity to flow from the Small Generator Facility to the T&D System.

(32) "Party" or "Parties" means Electric Distribution Company, Applicant, Interconnection Customer or any combination of the above.

(33) "Point of Interconnection" means the point where the Small Generator System is electrically connected to the EDC's T&D System and has the same meaning as the IEEE 1547, Section 3.1.13 defined term "point of common coupling."

(34) "Primary Line" is a term that describes a distribution line with a voltage rating of 600 volts or more.

(35) "Queue Position" means the order of a completed Application, relative to all other pending completed Applications, that is established based upon the date and time of the EDC's receipt of the completed Applications including application fees.

(36) "Scoping Meeting" means an initial meeting between representatives of the Parties that is conducted for the purpose of discussing alternative interconnection options, to exchange information, including any T&D System data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, or to determine the potential feasible Points of Interconnection.

(37) "Secondary Line" is a term used to describe a service line subsequent to the EDC's primary line that is rated for 600 volts or less.

(38) "Small Generator Facility" means the equipment used by an Applicant or an Interconnection Customer to generate, or store, electricity that operates in Parallel with the T&D System. For the purposes of OAR 860-082-0015 through 860-082-0080, a Small Generator Facility has an Electric Nameplate Capacity rating of 10 MW or less and may include a PV array or a prime mover and electric generator and the Interconnection Equipment required to safely interconnect with the T&D System.

(39) "Spot Network" is a type of T&D System that uses two or more inter-tied transformers to supply a single electrical distribution network circuit.

(40) "System Upgrades" means the required additions and modifications to the EDC's T&D System at or beyond the Point of Interconnection or to Affected Systems. System Upgrades do not include Interconnection Facilities.

(41) "Transmission Line" means the poles and wires used to transport electricity to an EDC's distribution system. For the purpose of the OSGIR, any line operating above 50,000 volts is considered a transmission line.

(42) "Witness Test" means the on-site visual verification of the interconnection installation and commissioning as required in IEEE 1547 Sections 5.3 and 5.4. For interconnection equipment that has not been Lab Tested, the Witness Test may, at the discretion of the EDC, also include a system design and production evaluation according to IEEE 1547 Sections 5.1 and 5.2 as applicable to the specific interconnection system technology employed.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

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860-082-0015

General Interconnection Provisions

(1) Application: Except as provided in OAR 860-039-0005 through 860-039-0080 for a Net Metering Facility, any Party wishing to interconnect or to make a capacity change to a Small Generator Facility must submit an Application to the EDC that owns and operates the T&D System to which interconnection is sought.

(a) The Application must be made using a standardized Application form found on the Commission's website as Form 1 or Form 2.

(b) A Small Generator Facility that is Lab Tested, inverter-based and has an Electric Nameplate Capacity of 25 kW or less must use application Form 1 which is a Level 1 application form. Applications for all other Small Generator Facilities up to 10 MW in size must use Form 2, which is the Level 2, Level 3 and Level 4 Application Form.

(2) Fees: A non-refundable application processing fee is required for all Applications except as excluded by OAR 860-039-0045 for Net Metering Facilities. The amount of the fee is dependent upon the review level requested in the application and is intended to cover reasonable costs for processing, minor study and evaluation of the application. The application fees are as follows:

(a) Level 1: \$100

(b) Level 2: \$500

(c) Level 3: \$1000

(d) Level 4: \$1000

(e) Applications requiring detailed studies and engineering evaluations may incur costs that are not covered by the application fee. Before any costs above the application fee are assessed, the Applicant must authorize the EDC to continue by assuming responsibility for the additional costs, or the application will be deemed withdrawn and the original application fee forfeited.

(f) Should an Applicant fail to receive approval at one review Level and make a subsequent application for the same facility at a different Level within the time frame for preserving the queue position, the original application fee and any other fees paid in conjunction with the original application will be applied to the fees for the updated application.

(3) Interconnection Application Review Procedures: Each EDC must review all Interconnection Requests duly submitted to the EDC at their authorized mailing address based on the following review procedures:

(a) Level 1 Interconnection Review Procedures: An EDC must use the Level 1 review procedures more specifically set forth in OAR 860-082-0040 for evaluation of all Applications to connect Small Generation Facilities except as provided in OAR 860-039-0005 through 860-039-0080 for a Net Metering Facility:

(A) The Electric Nameplate Capacity rating is 25 kW or less,

(B) The interconnection equipment is inverter based, and

(C) The Customer Interconnection Equipment proposed for the Small Generator Facility is Lab Tested.

(b) Level 2 Interconnection Review Procedures: An EDC must use the Level 2 review procedures more specifically set forth in OAR 860-082-0045 for evaluating all Applications to connect Small Generation except as provided in OAR 860-039-0005 through 860-039-0080 for a Net Metering Facility:

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(A) The Electric Nameplate Capacity is 2 MW or less,

(B) The proposed connection is to a radial distribution circuit, or to a Spot Network that is limited to serving one customer,

(C) The Customer Interconnection Equipment proposed for the Small Generator Facility is either Lab Tested Equipment or Field Tested Equipment, and

(D) The Application does not qualify for a Level 1 review.

(c) Level 3 Interconnection Review Procedures: An Applicant with a proposed project capacity of 10 MW or less that does not qualify for Level 1 or Level 2 review and does not export power beyond the Point of Interconnection may request to be evaluated under Level 3 procedures more specifically set forth in OAR 860-082-0050 except as provided in OAR 860-039-0005 through 860-039-0080 for a Net Metering Facility.

(d) Level 4 Interconnection Review Procedures: Except as provided in OAR 860-039-0005 through 860-039-0080 for a Net Metering Facility, an EDC must use the Level 4 review procedures more specifically set forth in OAR 860-082-0055 for evaluating all Applications to connect Small Generation Facilities that:

(A) Export power,

(B) Have an Electric Nameplate Capacity of 10 MW or less,

(C) Do not qualify for or have failed either the Level 1 or Level 2 interconnection review procedures.

(4) Term: Interconnection of a Small Generator Facility, under the provisions of the OSGIR, is deemed to be in effect for a period of 20 years or the life of the Power Purchase agreement, whichever is shorter, unless terminated earlier by the default or voluntary termination by the Interconnection Customer or by action of the Commission.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0020

General Requirements

(1) Aggregating Multiple Generators: If the Interconnection Request is for a Small Generator Facility that includes multiple Small Generator Facilities at a site for which the Applicant seeks a single Point of Interconnection, the Application must be evaluated for the purposes of the interconnection on the basis of the aggregate Electric Nameplate Capacity of the multiple Small Generator Facilities.

(2) Capacity Change: An Interconnection Customer must submit a new Application if the Interconnection Customer proposes to increase the capacity of its existing Small Generator Facility or if the Interconnection Customer changes its Small Generator Facility equipment or operations that increase its capacity. The Application and application fees are based on the new total Electric Nameplate Capacity of the Small Generator Facility.

(3) Point of Contact: The EDC must designate a contact person from whom information on the Application process and about the EDC's T&D System may be obtained. Such information must include studies and other materials useful to an understanding of the feasibility of interconnecting a Small Generator Facility at a particular point on the EDC's T&D System, except to the extent providing such materials would violate security requirements, confidentiality obligations or be contrary to state or federal regulations. The EDC must comply with reasonable

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requests for access to or copies of such studies, subject to any confidentiality agreements as may be required to protect the confidential or proprietary information interests of the EDC or third parties.

(4) Timeframes: The EDC and Interconnection Customer must meet all time frames provided in the OSGIR, or, for Net Metering Facilities, as provided in OAR 860-039-0005 through 860-039-0080, unless the parties mutually agree to a different schedule. If a Party cannot meet a deadline provided herein, the Party must notify the other Party, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

(5) Modifications: Once an Application is deemed complete by the EDC or once an Interconnection Agreement has been entered in to under provisions of the OSGIR, any modification to the Application or an existing Small Generator Facility, other than a Minor Equipment Modification requires that a new Application be submitted and a new or amended Interconnection Agreement be in place before modifications can take place.

(6) Site Control: Documentation of site control must be available and, if the Applicant is not currently a customer of the EDC, provided with the Application. Site control may be demonstrated through ownership of, a leasehold interest in, or an option or other right to develop a site for the purpose of constructing the Small Generator Facility. Site control may be documented by a property tax bill, deed, a lease agreement or other legally binding contract.

(7) Right of Access: The EDC must have access to the Applicant's premises for any reasonable purpose in connection with the Interconnection Application and any Interconnection Agreement pursuant to the OSGIR or if necessary to meet the legal obligation to provide service to its customers. Access must be requested at reasonable hours and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition.

(8) Multiple Interconnections: The EDC may propose to interconnect more than one Small Generator Facility at a single Point of Interconnection in order to minimize costs, and must not unreasonably refuse a request to do so. However, an Applicant or an Interconnection Customer may elect to pay the entire cost of separate Interconnection Facilities.

(9) Isolation Device: Small Generator Facilities must be capable of being isolated from the EDC.

(a) For Small Generator Facilities interconnecting to a Primary Line, the isolation must be by means of a lockable, visible-break isolation device readily accessible by the EDC.

(b) For Small Generator Facilities interconnecting to a Secondary Line, the isolation must be by means of a lockable isolation device whose status is clearly indicated and is readily accessible by the EDC. An exception is allowed for a Small Generation Facility that has a maximum total output of 30 amperes or less, is connected to a Secondary Line, utilizes Lab Tested, inverter-based Interconnection Equipment and is interconnected to the T&D System through an EDC-owned metered service. In this case, the meter base may serve as the required isolation device, provided it is readily accessible to the EDC.

(c) All other interconnection isolation devices must be installed, owned, and maintained by the owner of the Small Generator Facility and be capable of interrupting the full load of the Small Generator Facility and must be located between the Small Generator Facility and the Point of Interconnection.

(A) A draw-out type circuit breaker with the provision for padlocking at the draw-out position can be considered an isolation device for purposes of this requirement.

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(B) Alternatively, the Applicant or Interconnection Customer may elect to provide the EDC access to an isolation device that is contained in a building or area that may be unoccupied and locked or not otherwise readily accessible to the EDC, by providing a lockbox capable of accepting a lock provided by the EDC that will provide ready access to the isolation device. Where a lockbox is required, the Applicant or Interconnection Customer must install the lockbox in a location that is readily accessible by the EDC. The Applicant or Interconnection Customer must affix a placard in a location acceptable to the EDC that provides clear instructions to its operating personnel on how to gain access to the isolation device.

Stat. Auth.: ORS Ch. 183, 756 & 757
Stats. Implemented: ORS 756.040 & 756.060
Hist.: NEW

860-082-0025 Technical Standard

(1) The technical standard to be used in evaluating all Applications, unless otherwise provided for in the OSGIR, is IEEE 1547.

(2) The Applicant must construct, own, operate, and maintain its Small Generator Facility in accordance with the provisions of IEEE Standard 1547 and applicable provisions of the National Electrical Code (2005 ed.), and with applicable standards required by the Commission.

Stat. Auth.: ORS Ch. 183, 756 & 757
Stats. Implemented: ORS 756.040 & 756.060
Hist.: NEW

860-082-0030 Cost Responsibility

Estimates of the additional costs must be based on the scope of work determined and documented as a result of the applicable feasibility, facilities and system impact studies conducted and the estimated hours needed to complete the evaluation using an engineering cost not to exceed \$100 per hour (a factor that may be escalated annually, at the EDC's election, for inflation at the CPI index).

(1) Minor T&D System Modifications: Modifications to the existing T&D Systems identified by the EDC under a Level 2 or Level 3 review; such as changing meters, fuses, or relay settings; are deemed Minor Modifications. It is at the EDC's sole discretion to decide what constitutes a Minor Modification. The Applicant must bare the costs of making such Minor Modifications as may be necessary to gain approval of an Application.

(2) Interconnection Facilities: The EDC must identify under the review procedures of a Level 2 review or under a Level 4 Facilities Study, the Interconnection Facilities necessary to safely interconnect the Small Generator Facility with the EDC. The EDC must itemize the Interconnection Facilities for the Applicant including the cost of the facilities and the time required to build and install those facilities. The Interconnection Customer is responsible for the cost of the Interconnection Facilities.

(3) Interconnection Equipment: The Interconnection Customer is responsible for all reasonable expenses, including overheads, associated with owning, operating, maintaining, repairing, and replacing its Interconnection Equipment.

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(4) System Upgrades: The EDC must design, procure, construct, install, and own any System Upgrades. The actual cost of the System Upgrades, including overheads, is directly assigned to the Applicant. An Interconnection Customer may be entitled to financial compensation from other EDC Interconnection Customers who, in the future, benefit from the System Upgrades paid for by the Interconnection Customer. Such compensation is not governed by this rule.

(5) Adverse System Impact: The EDC is responsible for identifying Adverse System Impacts on any Affected Systems and for determining what mitigation activities or upgrades may be required to accommodate a Small Generator Facility. The actual cost of any actions taken to address the Adverse System Impacts, including overheads, must be directly assigned to the Applicant. The Applicant may be entitled to financial compensation from other EDCs, or other Interconnection Customers who, in the future, utilize the upgrades paid for by the Applicant, only to the extent as may be provided for by the Commission.

(6) Billings: The EDC may require a deposit of not more than 50 percent of the cost estimate, not to exceed \$1000, to be paid in advance by the Applicant for studies or Interconnection Facilities necessary to complete an Application and to interconnect to the T&D System. Progress billing, final billing and payment schedules must be agreed to by Parties prior to commencing work.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0035

Liability

A Party is liable for any loss, cost claim, injury, or expense including reasonable attorney's fees related to or arising from any act or omission in its performance of the provisions of the OSGIR or the resulting Interconnection Agreement.

(1) General liability insurance is not required for approval of an interconnection Application, or for the related Interconnection Agreement, for a Small Generator Facility with an Electric Nameplate Capacity of 200 KW or smaller, or for a Net Metering Facility as provided for in ORS 757.300(4)(c).

(2) All other Interconnection Customers are required to obtain prudent amounts of general liability insurance in an amount sufficient to protect other Parties from any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of the provisions of the OSGIR or the Interconnection Agreement. Neither Party may seek redress from the other Party in an amount greater than the amount of direct damage actually incurred.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0040

Level 1 Interconnection:

(1) Applicability: The EDC must use the Level 1 review procedures for an Application that meets all of the following:

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- (a) The Small Generator Facility is inverter-based;
 - (b) The Small Generator Facility has an Electric Nameplate Capacity of 25 kW or less;
 - (c) The Interconnection Equipment proposed for the Small Generator Facility is Lab Tested Equipment; and
 - (d) The proposed Point of Interconnection is not to a Transmission Line.
- (2) Approval: For a Small Generator Facility described in section (1), the EDC must approve an Application under the requirements set forth in section (4) if all the screening criteria set forth in section (3) are met. An EDC may not impose additional requirements to a Level 1 interconnection not specifically authorized under section (4).
- (3) Level 1 Screening Criteria:
- (a) For interconnection of a proposed Small Generator Facility to a radial distribution circuit, the aggregated generation, including the proposed Small Generator Facility, on the circuit must not exceed 15 percent of the Line Section annual peak load as most recently measured at the sub-station or calculated for the Line Section.
 - (b) For interconnection of a proposed Small Generator Facility to the load side of Spot Network protectors, the proposed Small Generator Facility and the aggregated other generation must not exceed the lesser of 5 percent of a Spot Network's maximum load or 50 kW.
 - (c) If the proposed Small Generator Facility is to be interconnected on a single-phase shared secondary service line, the aggregate generation capacity on the shared secondary, including the proposed Small Generator Facility, must not exceed 20 kW.
 - (d) If the proposed Small Generator Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service line, its addition must not create a current imbalance between the two sides of the 240 volt service of more than 20 percent of the nameplate rating of the service transformer.
 - (e) The proposed interconnection must use existing EDC facilities.
- (4) Level 1 Interconnection Review Procedure:
- (a) The Applicant must submit its Application and appropriate fees to the EDC at its designated address. The appropriate application is available at the Commission web site, Form 1.
 - (b) The EDC must, within 10 business days of receipt of the Application, inform the Applicant that the Application is either complete or incomplete. If the application is incomplete, the EDC must indicate what information is missing. In the event the Applicant does not receive notification within 10 business days, the Applicant may contact the EDC to determine the status of the Application. If the EDC notified the Applicant that the Application is incomplete, the Applicant must provide the required information within 10 business days (or such other time as the parties mutually agree) or the Application is deemed to be withdrawn.
 - (c) If the EDC does not have a record of receipt of the Application, the Applicant must provide the EDC with an additional copy of the Application. If the Applicant can demonstrate that the original completed Application was delivered to the EDC, the EDC must forgo the initial 10 business day response period and complete its review within 15 business days.
 - (d) Queuing Priority: Once the EDC deems the Application to be complete, it must assign the project a Queue Position. The Queue Position of each Application is used to determine any potential Adverse System Impacts of the proposed Small Generator Facility based on the relevant screening criteria set forth in section (3). The Applicant must proceed under the timeframes of this section. The EDC must schedule a Scoping Meeting to notify the Applicant about other higher-queued Applications on the same radial line or Spot Network to which the Applicant is seeking interconnection.

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(e) If in the process of evaluating the interconnection request, the EDC determines that supplemental or clarifying information is required, the EDC must request the information from the Applicant. The time required for the receipt of the additional information may extend the time necessary to complete the evaluation, but only to the extent of the time required for the receipt of the additional information. The EDC may not alter the Applicant's Queue Position.

(f) The EDC must evaluate the proposed Small Generator Facility equipment using Level 1 screening criteria set forth in section (3). No later than 15 business days from the date the Application is deemed complete; the EDC must notify the Applicant whether the Small Generator Facility meets the screening criteria.

(g) The Applicant must provide the EDC at least 20 business days notice of the planned commissioning for the Small Generator Facility. The EDC has the option of conducting a Witness Test at a mutually agreeable time within 10 business days of the scheduled commissioning or waiving the Witness Test and notifying the Applicant. If the EDC does not conduct the Witness Test within 10 business days of the scheduled commissioning date or within a time otherwise mutually agreed upon by the Parties, the Witness Test is deemed waived.

(5) Interconnection of a Level 1 Small Generation Facility: The interconnection process is not complete until:

(a) The Application has passed the Level 1 screening criteria;

(b) The Small Generator Facility installation is approved by the electric code inspector with jurisdiction over the interconnection;

(c) The Witness Test, if conducted by the EDC, is successful; and

(d) The Parties execute a Certificate of Completion.

(6) Witness Test Not Acceptable: If the Witness Test is conducted and is not acceptable to the EDC, the Applicant must be granted a period of 30 calendar days to resolve any deficiencies. The Parties may mutually agree to extend the time period for resolving any deficiencies. If the Applicant fails to address and resolve the deficiencies to the satisfaction of the EDC within the agreed upon time period, the Application is deemed withdrawn.

(7) Nonapproval: If the Small Generator Facility is not approved under a Level 1 review, the Applicant may submit a new Application, including the difference in the application fee or deposit, for consideration under Level 2, Level 3 or Level 4 procedures specified in OAR 860-082-0045 through 860-082-0055 without losing its original Queue Position if the new Application is submitted within 15 business days of notice that the original Application was not approved.

(8) Operation: The Applicant must notify the EDC before commencing operation and only operate the Small Generator Facility in accordance with the executed Interconnection Agreement and the executed Power Purchase Agreement.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0045

Level 2 Interconnection

(1) Applicability: The EDC must use the Level 2 review procedures for an Application that does not qualify for Level 1 review and meets the requirements for a Level 2 interconnection as set forth in subsections (a) through (c) below:

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- (a) The Small Generator Facility has an Electric Nameplate Capacity of 2 MW or less;
 - (b) The proposed Point of Interconnection is to either:
 - (A) A radial distribution circuit, or
 - (B) A Spot Network distribution circuit limited to serving one premise; and
 - (c) The Interconnection Equipment proposed for the Small Generator Facility is either Lab Tested Equipment or Field Tested Equipment.
- (2) Approval: The EDC must approve interconnection under the Level 2 interconnection review process set forth in section (4) of this rule if the Small Generator Facility qualifies as a Level 2 facility as specified in section (1) and all of the Level 2 screening criteria set forth in section (3) are met. An EDC may not impose additional requirements not specifically authorized under section (5).
- (3) Level 2 Screening Criteria:
- (a) For interconnection of a proposed Small Generator Facility to a radial distribution circuit, the aggregated generation, including the proposed Small Generator Facility, on the circuit must not exceed 15 percent of the Line Section annual peak load as most recently measured at the substation or calculated for the Line Section.
 - (b) For interconnection of a proposed Small Generator Facility to the load side of Spot Network protectors, the proposed Small Generator Facility and the aggregated other generation must not exceed the lesser of 5 percent of a Spot Network's maximum load or 50 kW.
 - (c) The proposed Small Generator Facility, in aggregation with other generation on the distribution circuit, must not contribute more than 10 percent to the distribution circuit's maximum Fault Current at the point on the primary voltage distribution line nearest the Point of Interconnection.
 - (d) The proposed Small Generator Facility, in aggregate with other generation on the distribution circuit, must not cause any distribution protective devices and equipment (including, but not limited, to substation breakers, fuse cutouts, and line reclosers), or other EDC equipment on the T&D System to be exposed to Fault Currents exceeding 90 percent of the short circuit interrupting capability; and the Small Generator Facility's Point of Interconnection must not be located on a circuit that already exceeds 90 percent of the short circuit interrupting capability.
 - (e) The proposed Small Generator Facility's Point of Interconnection must not be on a Transmission Line.
 - (f) The Small Generator Facility, in aggregate with other generation interconnected to the distribution side of a substation transformer feeding the circuit where the Small Generator Facility proposes to interconnect, must not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four distribution busses from the point of interconnection).
 - (g) If the proposed Small Generator Facility interconnection is to a Primary Line on the distribution system, the interconnection must be according to the screening criteria set forth in paragraphs (A) and (B) of this subsection, depending on the type of electrical service provided by the EDC.
 - (A) If the Small Generator Facility is 3-phase or single-phase and is to be connected to a 3-phase 3 wire Primary Line, it must be connected phase-to-phase.
 - (B) If the Small Generator Facility is 3-phase or single-phase and is to be connected to a 3-phase 4-wire Primary Line, must be connected line to neutral and effectively grounded.

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(h) If the Small Generator Facility is to be interconnected on single-phase shared service line on the T&D System, the aggregate generation capacity on the shared secondary line, including the proposed Small Generator Facility, must not exceed 20 kW.

(i) If the proposed Small Generator Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service line, its addition must not create an imbalance between the two sides of the 240 volt service of more than 20 percent of the nameplate rating of the service transformer.

(j) Except as provided in subsection (4)(f), the interconnection must only use existing EDC facilities and the Applicant's proposed facilities.

(k) The Small Generator Facility, in aggregate with existing transmission loads must not cause a transmission system circuit to exceed its design capacity on the transmission system circuit directly connected to the distribution circuit where the interconnection is proposed.

(4) Level 2 Interconnection Review Procedure:

(a) The Applicant must submit its Application and appropriate fees to the EDC at its designated address. The Application form is available on the Commission web site as Form 2.

(b) The EDC must, within 10 business days of receipt of the Application, inform the Applicant that the Application is either complete or incomplete. If the application is incomplete, the EDC must indicate what information is missing. In the event the Applicant does not receive notification within 10 business days, the Applicant may contact the EDC to determine the status of the Application.

(c) If the EDC does not have a record of receipt of the Application, the Applicant must provide the EDC with an additional copy of the Application. If the Applicant can demonstrate that the original completed Application was delivered to the EDC, the EDC must forgo the initial 10 business day response period and complete its review within 20 business days of its receipt.

(d) Queuing Priority: Once the EDC deems the Application to be complete, it must assign the project a Queue Position. The Queue Position of each Application is used to determine any potential Adverse System Impacts of the proposed Small Generator Facility based on the relevant screening criteria summarized in section (3) of this rule. The Applicant must proceed under the timeframes of this section. The EDC must schedule a Scoping Meeting to notify the Applicant about other higher-queued Applications on the same radial line or Spot Network to which the Applicant is seeking to interconnect.

(e) Initial Review: Within 20 business days after the EDC notifies the Applicant that it has received a completed Interconnection Request, or within a time period mutually agreed to by Parties, the EDC must:

(A) Evaluate the Application using the Level 2 screening criteria set forth in section (3) of this rule,

(B) Review any independent analysis that may be provided by the Applicant using the same criteria, and

(C) Provide the Applicant the results of its review, including a comparison of these results and the independent analysis provided by the Applicant (if applicable).

(f) If in the process of evaluating the interconnection request, the EDC determines that supplemental or clarifying information is required, the EDC must request the information from the Applicant. The time required for the receipt of the additional information may extend the time necessary to complete the review, but only to the extent of the time required for the receipt of the additional information. The EDC may not alter the Applicant's Queue Position.

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(g) If the Small Generator Facility fails to meet one or more of the Level 2 screening criteria, but the EDC determines that the Small Generator Facility could be interconnected safely if minor modifications to the T&D system (for example, changing meters, fuses, or relay settings) were made; it must offer the Applicant a non-binding, good faith estimate of the costs of such proposed minor modifications and proceed with the minor modifications if authorized by the Applicant.

(h) The EDC must approve the application if

(A) The EDC determines that the Application passes the Level 2 screening criteria, or

(B) The Application fails one or more of the Level 2 screening criteria but the EDC determines that the Small Generator Facility can be interconnected safely and reliably after making the modifications described in subsection (g), and the EDC has received authorization from the Applicant to implement the minor modifications.

(i) The Applicant must provide the EDC at least 20 business days notice of the planned commissioning for the Small Generator Facility. The EDC has the option of conducting a Witness Test at a mutually agreeable time within 10 business days of the scheduled commissioning. If the EDC does not conduct the Witness Test within 10 business days of the scheduled commissioning date, or within the time otherwise mutually agreed upon by the parties, the Witness Test is deemed waived.

(5) Interconnection of a Level 2 Small Generator Facility: The interconnection is not complete until:

(a) All Level 2 screening criteria are satisfied and any minor modifications to the T&D System that were identified, if any, are implemented;

(b) The Small Generator Facility installation is approved by electric code inspector with jurisdiction over the interconnection;

(c) The Witness Test, if conducted by the EDC, is successful; and

(d) The Parties execute a Certificate of Completion.

(6) Witness Test Not Acceptable: If the Witness Test is conducted and is not acceptable to the EDC, the Applicant must be allowed a period of 30 calendar days to resolve any deficiencies. The Parties may mutually agree to extend the time period for resolving any deficiencies. If the Applicant fails to resolve the deficiencies to the satisfaction of the EDC within the agreed upon time period, the Application is deemed withdrawn.

(7) Non-approval: If the Small Generator Facility is not approved under a Level 2 review, the Applicant may submit a new Application including the difference in the application fee or deposit, for consideration under Level 3 or Level 4 procedures specified in OARs 860-082-0050 and 860-082-0055 without losing its original Queue Position provided the new Application is submitted within 15 business days of notice that the Application was not approved.

(8) Operation: The Applicant must notify the EDC before commencing operation and only operate the Small Generator Facility in accordance with the executed Interconnection Agreement and the executed Power Purchase Agreement.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

Oregon Small Generator Interconnection PUC Staff's Proposed Rules

860-082-0050

Level 3 Interconnection

(1) Applicability: The EDC must use the Level 3 interconnection review procedures for an Application that does not qualify for Level 1 or Level 2 review and meets all the requirements set forth in subsections (a) through (c) below:

- (a) The Small Generator Facility has an Electric Nameplate Capacity rating of 10 MW or less; and
- (b) The proposed Point of Interconnection is not to a Transmission Line; and
- (c) The Small Generator Facility does not export power beyond the point of interconnection and utilizes reverse power relays or other protection functions that prevent power flow onto the Area Network;

(2) Approval: A Level 3 Small Generator Facility, as defined in section (1) of this rule, meeting the screening criteria set forth in sections (3) and (4) below must be further evaluated using Level 2 Screening Criteria set forth in OAR 860-082-0045(3). Once the Level 2 Screening Criteria are met, the Application must be reviewed using the procedure set forth in section (5) of this rule. Level 3 interconnections do not require an Interconnection Feasibility Study; however, the EDC may choose to conduct such a study at its own expense, and it must complete the Interconnection Feasibility Study within 25 calendar days.

(3) Screening Criteria- Area Networks: For an Small Generator Facility to interconnect to the load side of an Area Network distribution circuit, the criteria set forth in subsections (a) through (e) below must be met:

- (a) The Electric Nameplate Capacity of the Small Generator Facility is 50 kW or less;
- (b) The proposed Small Generator Facility utilizes a Lab Tested, inverter-based equipment package for interconnection;
- (c) The Small Generator Facility utilizes reverse power relays or other protection functions that prevent power flow on to the Area Network;
- (d) The aggregated other generation on the Area Network does not exceed the lesser of 5 percent of an Area Network's maximum load or 50 kW; and
- (e) The interconnection must use only existing EDC facilities and the Applicant's proposed facilities.

(4) Alternative Screening Criteria -- Not Networked: For a Small Generator Facility to interconnect to a distribution circuit that is not networked, the criteria set forth in subsections (a) through (f) below must be met:

- (a) The Small Generator Facility has an Electric Nameplate Capacity of 10 MW or less;
- (b) The aggregated total of the Electric Nameplate Capacity of all of the generators on the circuit, including the proposed Small Generator Facility, is 10 MW or less;
- (c) The Small Generator Facility does not export power beyond the point of interconnection and employs reverse power relays or other protection functions that prevent power flow onto the T&D System;
- (d) The Small Generator Facility's proposed interconnection must be to a radial distribution circuit;
- (e) The Small Generator Facility is not served by a shared transformer; and
- (f) Except as allowed in subsection (5)(f) of this rule, the interconnection must use only existing EDC facilities and the Applicant's proposed facilities.

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(5) Level 3 Interconnection Review Procedure:

(a) The Applicant must submit its Application and appropriate fees to the EDC at its designated address. The Application form is available on the Commission web site as Form 2.

(b) The EDC must, within 10 Business Days of receipt of the Application, inform the Applicant that the Application is either complete or incomplete. If the Application is incomplete, the EDC must indicate what information is missing. In the event the Applicant does not receive notification within 10 business days, the Applicant may contact the EDC to determine the status of the Application.

(c) If the EDC does not have a record of receipt of the Application, the Applicant must provide the EDC with an additional copy of the Application. If the Applicant can demonstrate that the original completed Application was delivered to the EDC, the EDC must forgo the initial 10 business day response period; and complete its review within 20 business days of its receipt.

(d) Queuing Priority: Once the EDC deems the Application to be complete, it must assign the project a Queue Position. The Queue Position of each Application is used to determine any potential Adverse System Impacts of the proposed Small Generator Facility based on the relevant screening criteria summarized in sections (3) and (4) of this rule. The Applicant must proceed under the timeframes of this section. The EDC must schedule a Scoping Meeting to notify the Applicant about other higher-queued Applications on the same radial line or Area Network to which the Applicant is seeking to interconnect.

(e) Initial Review: Within 20 business days after the EDC notifies the Applicant that it has received a completed Interconnection Request or within a time period mutually agreed to by Parties, the EDC must:

(A) Evaluate the Application using the Level 3 screening criteria set forth in sections (3) and (4) of this rule; and

(B) Review any independent analysis that may be provided by the Applicant using the same criteria, and

(C) Provide the Applicant the results of its review, including a comparison of these results and the independent analysis provided by the Applicant (if applicable).

(f) If in the process of evaluating the interconnection request, the EDC determines that supplemental or clarifying information is required, the EDC must request the information from the Applicant. The time required for the receipt of the additional information may extend the time necessary to complete the review, but only to the extent of the time required for the receipt of the additional information. The EDC may not alter the Applicant's Queue Position.

(g) If the Small Generator Facility fails to meet one or more of the Level 3 screening criteria, but the EDC determines that the Small Generator Facility could likely be interconnected safely if minor modifications to the T&D system (for example, changing meters, fuses, or relay settings) were made, it must offer the Applicant a non-binding, good faith estimate of the costs of such proposed minor modifications and proceed with the minor modifications if authorized by the Applicant.

(h) The EDC must approve the Application if the EDC determines that the Application:

(A) Passes the Level 3 screening criteria in sections (3) or (4) of this rule; or

(B) Fails one or more of the Level 3 screening criteria, or does not meet every approval requirement in section (2), but the EDC determines that the Small Generator Facility can be interconnected safely and reliably after making the modifications described in subsection (g) above, and the EDC has received authorization from the Applicant to implement the minor modifications.

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(i) The Applicant must provide the EDC at least 20 business days notice of the planned commissioning for the Small Generator Facility. The EDC has the option of conducting a Witness Test at a mutually agreeable time within 10 business days of the scheduled commissioning. If the EDC does not conduct the Witness Test within 10 business days of the scheduled commissioning date, or within the time otherwise mutually agreed upon by the parties, the Witness Test is deemed waived.

(j) Non-approval:

(A) If the Small Generator Facility fails to pass the screening criteria set forth in sections (3) or (4), or is not approved under a Level 3 review; then the EDC must provide, at the request of the Applicant, a written justification for denying the Application.

(B) If the Small Generator Facility is not approved under a Level 3 review, the Applicant may submit a new Application including the difference in the application fee or deposit, for consideration under Level 4 review procedures specified in OAR 860-050-0055 without losing its original Queue Position provided the new Application is submitted within 15 business days of notice that the Application was not approved. Any previous application fee or deposit must be applied toward the Level 4 application fee.

(6) Interconnection of a Level 3 Small Generator Facility: The interconnection review process is not complete until:

(a) All Level 3 screening criteria are satisfied and any minor modifications to the T&D System that may have been identified are implemented;

(b) The Small Generator Facility installation is approved by electric code inspector with jurisdiction over the interconnection;

(c) There is a successful completion of the Witness Test, if required; and

(d) The Parties execute a Certificate of Completion.

(7) Witness Test Not Acceptable: If the Witness Test is conducted and is not acceptable to the EDC, the Applicant must be allowed a period of 30 calendar days to resolve any deficiencies. The Parties may mutually agree to extend the time period for resolving any deficiencies. If the Applicant fails to resolve the deficiencies to the satisfaction of the EDC within the agreed upon time period, the Application is deemed withdrawn.

(8) Operation: The Applicant must notify the EDC prior to commencing operation and must operate the Small Generator Facility in accordance with the executed Interconnection Agreement.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

OAR 860-082-0055

Level 4 Interconnection

(1) Applicability: The EDC must use the Level 4 interconnection review procedures for an Application that does not qualify for Level 1, Level 2, or Level 3 review and for which the Small Generator Facility has an Electric Nameplate Capacity that is 10 MW or less.

(2) Approval: The EDC must approve interconnection under the Level 4 interconnection review procedure set forth in section (3) and studies set forth in sections (4) through (6) of this rule. The EDC may not impose requirements in addition to those set forth in the OSGIR.

(3) Level 4 Interconnection Review Procedure:

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(a) The Applicant must submit its Application and appropriate fees to the EDC at its designated address. The Application form is available on the Commission web site as Form 2.

(b) The EDC must, within 10 business days of receipt of the Application, inform the Applicant that the Application is either complete or incomplete. If the application is incomplete, the EDC must indicate what information is missing. In the event the Applicant does not receive notification within 10 business days, the Applicant may contact the EDC to determine the status of the Application.

(c) If the EDC does not have a record of receipt of the Application, the Applicant must provide the EDC with an additional copy of the Application. If the Applicant can demonstrate that the original completed Application was delivered to the EDC, the EDC must forgo the initial 10 business day response period and complete its review within 20 business days of its receipt.

(d) **Queuing Priority:** Once the EDC deems the Application to be complete, it must assign the project a Queue Position unless a queue position was already assigned under a previous lower-level Application that was not approved. The Queue Position of each Application is used to determine any potential Adverse System Impacts of the proposed Small Generator Facility based on the relevant data contained in the Application, the outcomes of the various studies and the Applicant's desired interconnection location. The Applicant must proceed under the timeframes of this section. The EDC must schedule a Scoping Meeting to notify the Applicant about other higher-queued Applications on the same radial line or Area Network to which the Applicant is seeking to interconnect.

(e) If in the process of evaluating the interconnection request, the EDC determines that supplemental or clarifying information is required, the EDC must request the information. The time required for the receipt of the additional information may extend the time before the Scoping Meeting can be convened but only to the extent of the time required for the receipt of the additional information. The EDC may not alter the Applicant's Queue Position. Supplemental or clarifying information can be provided in the scoping meeting.

(f) **Studies:** By mutual agreement of the Parties, the Scoping Meeting, Interconnection Feasibility Study, Interconnection Impact Study, or Interconnection Facilities Studies (or any combination thereof) as set forth in these Level 4 procedures may be waived.

(g) **Scoping Meeting:** A Scoping Meeting must be held within 10 business days, or as agreed upon by the Parties, after the EDC has notified the Applicant that the Application is deemed complete. The purpose of the meeting is to review the Application including any existing studies relevant to the Application, (such as the results from the Level 1, Level 2 or Level 3 screening criteria and studies or, if available, the Applicant's analysis of the proposed interconnection using the same criteria as the EDC applies to the Application). Parties are expected to bring to the Scoping Meeting such personnel, including system engineers and other resources, as may be reasonably required to accomplish the purpose of the meeting. Some Scoping Meeting outcomes may include:

(A) An identification of the need for further studies as described in sections (4), (5) and (6) of this rule;

(B) Possible changes or modifications to the Application to facilitate the interconnection or reduce costs; or

(C) No changes at all and the EDC being able to proceed with the application without further studies.

In any case, where changes result from the scoping meeting, the Applicant maintains the assigned queue position so long as the additions or changes to the Application can be rectified

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within a 10 business day window, or a period mutually agreed upon by parties, from the date of notification.

(h) If the Parties agree at the Scoping Meeting that an Interconnection Feasibility Study needs to be performed, the EDC has up to 15 business days to complete an Interconnection Feasibility Study Agreement that provides the Applicant with an outline of the scope and a good faith, non-binding estimate of the cost to perform the study. A model form of an Interconnection Feasibility Study Agreement is provided on the Commission's website.

(4) Interconnection Feasibility Study:

(a) If the Applicant agrees to the cost estimate, the EDC must perform an Interconnection Feasibility Study. The study must evaluate the effects of the proposed Small Generator Facility on the existing EDC's T&D System and look for possible Adverse System Impacts. Some Feasibility Study outcomes may include:

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

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

(C) Initial review of grounding requirements and system protection; and

(D) Description and estimated cost of Interconnection Facilities and System Upgrades required to interconnect the Small Generator Facility to the EDC in a safe and reliable manner.

(b) If the Applicant asks that the Interconnection Feasibility Study evaluate multiple potential points of interconnection, the EDC will perform the additional evaluations at the Applicant's expense.

(c) If the Interconnection Feasibility Study identifies possible Adverse System Impacts from the Small Generator Facility, an Interconnection System Impact Study is required. The EDC has up to 15 business days to complete an Interconnection System Impact Study Agreement that provides the Applicant with an outline of the scope and a good faith, non-binding estimate of the cost to perform the study. A model form of an Interconnection System Impact Study Agreement is provided on the Commission's website.

(5) Interconnection System Impact Study:

(a) If the Applicant agrees to the cost estimate, the EDC must conduct an Interconnection System Impact Study. The study must evaluate the Adverse System Impacts identified in the Interconnection Feasibility Study, and study other potential impacts including, but not limited to, those identified in the Scoping Meeting.

(b) The study must consider all generating facilities that, on the date the Interconnection System Impact Study is commenced:

(A) Are directly interconnected with the EDC's system;

(B) Have a pending higher Queue Position to interconnect to the system; or;

(C) Have a signed Interconnection Agreement.

(c) The study must include, among other things:

(A) A short circuit analysis,

(B) A stability analysis,

(C) A power flow analysis,

(D) Voltage drop and flicker studies,

(E) Protection and set point coordination studies, and

(F) Grounding reviews.

(d) The Interconnection System Impact Study must:

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(A) State the underlying assumptions of the study,

(B) Show the results of the analyses, and

(C) List any potential impediments to providing the requested interconnection service.

(e) If the Applicant sponsored a separate independent impact study, the EDC must also evaluate and address any alternative findings from that study.

(f) The outcome of the System Impact Study must include a report of any Interconnection Facilities and System Upgrades to the EDC's T&D system and any System Upgrades to Affected Systems required to allow the proposed interconnection to occur including an estimate of the equipment costs and standard delivery schedules.

(g) If Interconnection Facilities are found to be necessary in the System Impact Study, the EDC must determine the price and delivery of the facilities. The EDC has up to 15 business days after completion of the Interconnection System Impact Study, or a period mutually agreed upon by parties, to develop an Interconnection Facilities Study Agreement that provides the Applicant with the scope and a good faith, non-binding estimate of the cost to perform the study. A model form of an Interconnection Facilities Study Agreement is provided on the Commission's website.

(6) Interconnection Facilities Study:

(a) If the Applicant agrees to the cost estimate, an Interconnection Facilities Study must be performed by the EDC to evaluate the cost of equipment, and the engineering, procurement and construction work (including overheads) needed to implement the conclusions of the Interconnection Feasibility Study and Interconnection System Impact Study for interconnection of the proposed Small Generator Facility. The Interconnection Facilities Study must also identify:

(A) The electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment;

(B) The nature and estimated cost of the EDC's Interconnection Facilities;

(C) System Upgrades required at the EDC and on Affected System that are necessary to accomplish the interconnection; and

(D) A detailed estimate of the time required to procure materials and equipment and complete the construction and installation of such facilities.

(b) Parties may agree to permit the Interconnection Customer to separately arrange for a third party to design and estimate the construction costs for the required Interconnection Facilities. In such a case, the EDC must review the design and cost estimates of the facilities, under the provisions of the Interconnection Facilities Study Agreement. If the Parties agree to separately arrange for design and construction estimates, and comply with any security and confidentiality requirements, the EDC must make all relevant information and required specifications available to the Applicant at no cost in order to permit the Applicant to obtain an independent design and cost estimate for the facilities, to be built in accordance with such specifications.

(7) Approval: Upon completion of the Interconnection Facilities Study, and with the agreement of Applicant to pay for necessary Interconnection Facilities and System Upgrades identified in the Interconnection Facilities Study as approved by the EDC, and provided the EDC determines, based in the studies in sections (4) through (6) of this rule, that safety and reliability will not be compromised from interconnecting the Small Generator Facility, the EDC must approve the application

(a) The interconnection customer must provide the EDC at least 20 days notice of the planned commissioning for the small generator facility.

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(b) The EDC has the option of conducting a witness test at a mutually agreeable time within 10 business days of the scheduled commissioning or waiving the test and notifying the Applicant. If the EDC does not conduct the witness test within the 10 business days or within the time otherwise mutually agreed upon by the parties, or if the EDC notifies the Applicant of its intent not to perform the test, the witness test is deemed waived.

(8) Non-Approval: If the Application is denied, the EDC must provide a written explanation explaining why the Application was denied.

(9) Interconnection of the Small Generator Facility: The Interconnection is not final until:

(a) Any facilities and upgrades agreed upon in sections (3) through (6) are satisfied;

(b) The Small Generator Facility installation is inspected and approved by the electric code inspector with jurisdiction over the interconnection;

(c) The Parties execute a Certificate of Completion; and

(d) There is a successful completion of the Witness Test, if conducted by the EDC.

(10) Witness Test Not Acceptable: If the Witness Test is conducted and is not acceptable to the EDC, the Applicant must be allowed a period of 30 calendar days to resolve any deficiencies. The Parties may mutually agree to extend the time period for resolving any deficiencies. If the Applicant fails to resolve the deficiencies to the satisfaction of the EDC within the agreed upon time period, the Application is deemed withdrawn. The Applicant has the right to submit a new Interconnection Request for consideration at a later time but relinquishes the current Small Generation Facility's position in the queue.

(11) Operation: The Applicant must notify the EDC prior to commencing operation and must operate the Small Generator Facility in accordance with the executed Interconnection Agreement and the executed Power Purchase Agreement.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0060

Recordkeeping and Reporting Requirements

(1) The EDC must maintain, for a period of not less than two years, a record of all Applications received, the time required to complete its review of each Application, and reasons for the actions taken on the Applications.

(2) The EDC must maintain, for as long as the interconnection is in place, a record of all Interconnection Agreements completed and including the related "As Built" Form 4 that records equipment specifications and initial settings. The utility must provide a copy of these records to the Applicant or Interconnection Customer within 15 business days upon receipt of a written request.

(3) The EDC must prepare and submit to the Commission, an annual report summarizing the EDC's interconnection activities including, but not necessarily limited to, the following information:

(a) For all Levels of Interconnection Applications:

(A) The number Interconnection Applications made,

(B) The number of interconnections established,

(C) The individual types of generators applying for interconnection and their capacity, and

(D) Interconnection Application location by Zip code.

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(b) For Level 2 through Level 4 Interconnection Applications:

(A) Estimated facilities costs from studies,

(B) Whether telemetry is required and the basic configuration, and

(C) System upgrades required and their estimated costs.

(c) For all applications that led to successful interconnections:

(A) Whether or not timelines were met and if not an explanation of why they were not met, and

(B) A record of any item(s) that Parties mutually agreed to waive.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0065

Metering and Monitoring

(1) Metering: The Interconnection Customer is responsible for the cost of the purchase, installation, operation, maintenance, testing, repair, and replacement of any special metering and data acquisition equipment deemed necessary by the terms of the (separate) Power Purchase Agreement except as provided in OAR 860-039-0005 through 860-039-0080 for a Net Metering Facility. The EDC must install, maintain and operate the metering equipment. Parties must be granted unrestricted access to such equipment as may be necessary for the purposes of conducting routine business.

(2) Monitoring: Small Generator Facilities approved and interconnected to the EDC under a Level 1, Level 2 or Level 3 Interconnection Application, and under a Level 4 Interconnection Application, up to an Electric Nameplate Capacity rating of 3 MW, except as noted herein, are not required to provide for remote monitoring of the electric output by the EDC. Level 4 Interconnection Applications with Electric Nameplate Capacities greater than 3 MW or Level 3 Interconnection Applications where the aggregated generation on the circuit, including the Applicant's Small Generator Facility, would exceed 50 percent of the line section annual peak load may be required to provide remote monitoring at the EDC's discretion. For Small Generator Facilities required to provide remote monitoring pursuant to provisions this subsection, the data acquisition and transmission to a point where it can be used by the EDC's control system operations must meet the performance based standards described in section (3) of this rule. Any data acquisition and telemetry equipment required by this rule must be installed, operated and maintained at the Interconnection Customer's expense.

(3) Telemetry is the remote communication from a Small Generator Facility to a point on the EDC's communication network where the data can be assimilated into the EDC's grid operations if desired.

(a) Parties may mutually agree to waive or modify any of the telemetry requirements contained in section (3) of this rule.

(b) The communication must take place via a Private Network Link using a Frame Relay or Fractional T-1 line or other such suitable device. Dedicated Remote Terminal Units, from the Interconnected Small Generator Facility to an EDC's substation and Energy Management System are not required.

(c) A single communication circuit from the Small Generator Facility to the EDC is sufficient.

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(d) Communications protocol must be DNP 3.0 or other standard used by the EDC.

(e) The Small Generator Facility must be capable of sending telemetric monitoring data to the EDC at a minimum rate of every 2 seconds (from the output of the Small Generator Facility's telemetry equipment to the EDC's Energy Management System).

(f) The minimum data points that a Small Generator Facility is required to provide telemetric monitoring to the EDC on are:

(A) Net real power flowing out or into the Small Generator Facility (analog);

(B) Net reactive power flowing out or into the Small Generator Facility (analog);

(C) Bus bar voltage at the point of common coupling (analog);

(D) Data Processing Gateway (DPG) Heartbeat (used to certify the telemetric signal quality);

and

(E) On-line or off-line status (digital).

(g) If an Interconnection Customer operates the equipment associated with the high voltage switchyard interconnecting the Small Generator Facility to the T&D System, and is required by this rule to provide monitoring and telemetry, the Interconnection Customer must provide the following monitoring to the EDC in addition to provisions in subsection (e) above:

(A) Switchyard Line and Transformer MW and MVAR values;

(B) Switchyard Bus Voltage; and

(C) Switching Devices Status

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0070

Temporary Disconnection

The EDC or Interconnection Customer may temporarily disconnect the Small Generator Facility from its T&D System at any time and for as long as reasonably necessary in the event one or more of the following conditions or events occurs:

(1) Under emergency conditions, the EDC or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the Small Generator Facility.

(a) The EDC must notify the Interconnection Customer promptly when it becomes aware of an emergency condition that may reasonably be expected to affect the Small Generator Facility operation. The Interconnection Customer must notify the EDC promptly when it becomes aware of an emergency condition that may reasonably be expected to affect the EDC's T&D System.

(b) To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

(2) Parties must make reasonable efforts to provide 5 business days notice prior to interruption caused by routine maintenance or construction and repair to the Small Generator Facility or EDC's T&D system and must use reasonable efforts to coordinate such interruption.

(3) In the case forced outages of the T&D System, the EDC must use reasonable efforts to provide the Interconnection Customer with prior notice of forced outages to effect immediate repairs to the T&D System. If prior notice is not given, the EDC must, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.

Oregon Small Generator Interconnection PUC Staff's Proposed Rules

(4) If the EDC determines that operation of the Small Generator Facility will likely cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generator Facility could cause damage to the EDC's T&D System then the EDC may disconnect the Small Generator Facility under the procedures of this section.

(a) The EDC must provide the Interconnection Customer supporting documentation used to reach the decision to disconnect upon request.

(b) The EDC may disconnect the Small Generator Facility if, after receipt of the notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, no less than 5 business days from the date the Interconnection Customer receives the EDC's written notice supporting the decision to disconnect, unless emergency conditions exist, in which case the Temporary Disconnection provisions of Interconnection Agreement apply.

(5) If the Interconnection Customer makes any change other than Minor Equipment Modifications without prior written authorization of the EDC, the EDC has the right to temporarily disconnect the Small Generator Facility.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

860-082-0075

Termination and Default

(1) No termination is effective until the Parties have executed provisions of this section applicable to such termination.

(a) The Interconnection Customer may terminate the Agreement at any time by giving the EDC 20 business days' written notice.

(b) Either Party may terminate the Interconnection Agreement after default pursuant to section (2) of this rule.

(c) The Commission may terminate the Interconnection Agreement.

(d) Upon termination of the Interconnection Agreement, any Small Generator Facility Interconnection Equipment must be disconnected from the EDC's T&D System at the Interconnection Customer's expense. The termination of the Interconnection Agreement does not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

(2) Default: Failure of a Party or Parties to meet the obligations of the OSGIR may constitute Default. Upon a default, the non-defaulting Party must give written notice of such default to the defaulting Party. The defaulting Party has 60 calendar days from receipt of the default notice within which to cure such default. If a default is not capable of being cured within 60 calendar days, the non-defaulting Party has the right to terminate the Interconnection Agreement by written notice.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW

Oregon Small Generator Interconnection PUC Staff's Proposed Rules

860-082-0080

Dispute Resolution

Except as provided in section (4) of this rule, nothing in this rule restricts the rights of any Party to file a complaint with the Commission under ORS Chapter 756. Pursuit of the dispute resolution process under this subsection does not affect an Applicant with regard to consideration of an Interconnection Request or its queue position.

(1) Before filing a complaint with the Commission or using the alternative dispute resolution mechanism set forth in section (4), the EDC, Applicant or Interconnection Customer must first provide the other Party with a written Notice of Dispute (Notice). Such Notice must describe in detail the nature of the dispute and a proposed resolution.

(2) The Party receiving a Notice under this section must refer it to a designated senior representative for resolution on an informal basis as promptly as practicable. In the event the Parties are unable to resolve the dispute within 30 calendar days (or such other period as the Parties may agree upon by mutual agreement), either Party may submit it to the Commission pursuant to ORS Chapter 756 or, if the Parties mutually agree, for alternative dispute resolution as set forth in section (4). Parties may not informally resolve a dispute that requires Commission approval as set forth in OAR 860-082-0005(3).

(3) For complaints filed with the Commission under ORS Chapter 756 or under the alternative dispute resolution process described in section (4), the following "Good Utility Practice" standard must be used:

(a) "Good Utility Practice" is any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition.

(b) Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods or acts generally accepted in the region.

(4) The EDC, the Interconnection Customer or Applicant may use the following alternative dispute resolution process only if both Parties to the dispute mutually agree in writing and both Parties accept all aspects of the alternative procedures set forth in this section. Once both Parties agree in writing to use this alternative dispute resolution process, it may only be terminated by mutual written agreement of the Parties.

(a) Procedures: Proceedings initiated under this alternate dispute resolution provision are conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within 10 days of the referral of the dispute to arbitration, each Party must choose one arbitrator to sit on a three-member arbitration panel. The two arbitrators so chosen must, within 20 days, select a third arbitrator to chair the arbitration panel. In either case, the arbitrators must be knowledgeable in electric utility matters, including electrical T&D Systems and interconnection equipment and facilities, and must not have any current or past substantial business or financial relationships with any Party to the arbitration (except prior arbitration). The arbitrator(s) must provide each of the Parties an opportunity to be heard and conduct the arbitration in accordance with applicable arbitration rules and Commission regulations.

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(b) Arbitration Decision: Unless the parties otherwise mutually agree, the arbitrator(s) must render a decision within 90 days of appointment and must notify the Parties in writing of such decision and the reasons therefore. The arbitrator(s) are authorized only to interpret and apply the provisions the OSGIR and any Interconnection Agreement (if applicable) entered in to under these rules, and the arbitrators do not have power to modify or change any of the above in any manner. Except as provided in subsections (c) and (d) of this section, the decision of the arbitrator(s) is final and binding on the Parties.

(c) The EDC must file, without further comment, the arbitrator's final decision with the Commission within 5 business days of its issuance. The Commission must approve or reject the final decision within 60 days of its filing, with written findings as to any deficiencies. The Commission's review of the arbitrator's final decision is limited solely to ensure:

(A) It does not unfairly or unjustly discriminate against a person who is not a party to the alternative dispute resolution process;

(B) It is consistent with the public interest, convenience and necessity, and

(C) It does not unfairly or unjustly harm the EDC's ratepayers.

Prior to rejecting the final decision, the Commission must notify the Parties of its intended action and provide an opportunity for a response.

(d) Either Party may request reconsideration of the Commission's order issued under subsection (c) as provided in ORS 756.561. A Party may appeal a Commission order as provided in ORS 756.610.

(e) A Party may not seek judicial review of an arbitrator's final decision except as provided in subsection (d).

(5) Costs: Each Party is responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:

(a) One half the cost of the single arbitrator jointly chosen by the Parties; or

(b) The cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen.

Stat. Auth.: ORS Ch. 183, 756 & 757

Stats. Implemented: ORS 756.040 & 756.060

Hist.: NEW