

Secretary of State

**NOTICE OF PROPOSED RULEMAKING HEARING\***

A Statement of Need and Fiscal Impact accompanies this form.

Public Utility Commission	860
Agency and Division	Administrative Rules Chapter Number
Diane Davis	(503) 378-4372
Rules Coordinator	Telephone
550 Capitol Street NE Suite 215, Salem, Oregon 97301-2551	
Address	

**RULE CAPTION**

In the Matter of a Rulemaking to Adopt Rules Related to Small Generator Facility Interconnection

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

Hearing Date (m/d/yyyy)	Time	Location	Hearings Officer
1 5/28/2008	9:30 a.m.	Administrative Law Judge\s Workshop, Public Utility Commission	Sarah Wallace
2		550 Capitol St. NE, Main Hearing Room, 1st Floor, Salem, OR	
3 6/11/2008	9:30 a.m.	Public Comment Hearing, Public Utility Commission	Sarah Wallace
4		550 Capitol St. NE, Main Hearing Room, 1st Floor, Salem, OR	

Auxiliary aids for persons with disabilities are available upon advance request

**RULEMAKING ACTION****ADOPT:**

Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

860-082-0005 through 860-082-0080

**AMEND:****REPEAL:****Renumber:** Secure approval of rule numbers with the Administrative Rules Unit prior to filing.**Amend and Renumber:** Secure approval of rule numbers with the Administrative Rules Unit prior to filing.**Statutory Authority: ORS**

Ch. 183, 756 &amp; 757

**Other Authority:****Statutes Implemented: ORS**

756.040, 756.060

*Continued on next page*

Secretary of State

**Continuation of ... NOTICE OF PROPOSED RULEMAKING HEARING\*****RULE SUMMARY**

The proposed rules provide procedures and standards for connecting a small generator facility of up to 10 MW output located on an interconnection customer's premises, to a regulated electric company's distribution or transmission system. These proposed rules are revised from the proposed rules noticed in the September 2007 Oregon Bulletin. The proposed rules are necessary to facilitate small generator interconnection by standardizing interconnection requirements and procedures and by ensuring the safety and reliability of the distribution and transmission systems. The proposed rules will impact regulated electric companies and customers who desire to connect a small generator facility of no more than 10 MW to the electrical system and either operate in parallel to the grid or sell excess power to the electric company.

ORS 183.335(2)(b)(G) requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing negative economic impact of the rule on business.

6/11/2008	Close of Hearing	Diane Davis	diane.davis@state.or.us	04/15/2008
Last Day (m/d/yyyy) and Time for Public Comment		Printed Name	Email Address	Date Filed

Please enter date as m/d/yyyy or mm/dd/yyyy

\*The *Oregon Bulletin* is published on the 1st of each month and updates the rule text found in the Oregon Administrative Rules Compilation. Notice forms must be submitted to the Administrative Rules Unit, Oregon State Archives, 800 Summer Street NE, Salem, Oregon 97310 by 5:00 pm on the 15th day of the preceding month unless this deadline falls on a Saturday, Sunday or legal holiday when Notice forms are accepted until 5:00pm on the preceding workday. ARC 920-2003

Secretary of State

**STATEMENT OF NEED AND FISCAL IMPACT**

A Notice of Proposed Rulemaking Hearing or a Notice of Proposed Rulemaking accompanies this form.

Public Utility Commission

860

Agency and Division

Administrative Rules Chapter Number

In the Matter of a Rulemaking to Adopt Rules Related to Small Generator Facility Interconnection

Rule Caption (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)

In the Matter of:

a Rulemaking to Adopt Rules Related to Small Generator Facility Interconnection

Statutory Authority: ORS

Ch. 183, 756 &amp; 757

Other Authority:

Stats. Implemented: ORS

756.040, 756.060

Need for the Rule(s):

The rules are necessary to set standards and procedures for interconnecting a small generator facility of up to 10 MW to a regulated electric company. The rules are necessary to facilitate interconnection of a small generator facility of up to 10 MW without unduly burdening the small generator facility customer and without compromising the safety or reliability of the electric company's transmission and distribution systems.

Documents Relied Upon, and where they are available:

1. Oregon Revised Statutes (ORS) available online at <http://www.leg.state.or.us/ors/757.html>
2. Informal comments and interconnection workgroup responses to Commission Staff data requests available online at [http://www.puc.state.or.us/PUC/admin\\_rules/intercon.shtml](http://www.puc.state.or.us/PUC/admin_rules/intercon.shtml)
3. Formal comments submitted in Docket AR 521 available online at <http://apps.puc.state.or.us/edockets/docket.asp?DocketID=14256>

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Secretary of State

**Continuation of ... STATEMENT OF NEED AND FISCAL IMPACT****Fiscal and Economic Impact:**

The Public Utility Commission will enforce the rules adopted as a result of this rulemaking. The fiscal impact to the Public Utility Commission is expected to be minimal because the resulting activities are all part of the routine Commission operations, and it is expected that those activities can be handled at existing staffing levels. The proposed rules will impact those customers who desire to connect a small generator facility of no more than 10 MW to a regulated electric company. It is anticipated that the adoption of rules will reduce interconnection costs by streamlining the interconnection process and by helping to ensure that only those facilities that will not compromise the safety and reliability of the electric company's distribution and transmission systems are interconnected. The regulated electric companies will be required to submit reports to the Commission. The potential magnitude of the costs to comply with the rules cannot be quantified at this time. Such costs will necessarily depend upon the complexity of the proposed interconnection. For some small generator customers the only compliance cost will be the application fee, but for small generator customers proposing a more complex interconnection, the costs are potentially greater.

**Statement of Cost of Compliance:****1. Impact on state agencies, units of local government and the public (ORS 183.335(2)(b)(E)):**

The Public Utility Commission will enforce the rules adopted as a result of this rulemaking, and it is anticipated that enforcement can be handled at existing staffing levels. The proposed rules do not directly impact other state agencies or local governments. Regulated electric companies will be required to review proposed interconnections (as they do now) and provide regular reports to the Commission. Only those customers who apply to interconnect a small generator facility of up to 10 MW will be impacted by these rules.

**2. Cost of compliance effect on small business (ORS 183.336):****a. Estimate the number of small businesses and types of business and industries with small businesses subject to the rule:**

The proposed rules will impact any small business that applies to interconnect a small generator facility of up to 10 MW to a regulated electric company. The potential number of small business customers applying to interconnect cannot be quantified at this time.

**b. Projected reporting, recordkeeping and other administrative activities required for compliance, including costs of professional services:**

Those small business or other customers who propose to interconnect a small generator facility will be required to comply with interconnection standards and procedures, and with operation, maintenance and testing standards. Most will either contract for design and installation or will purchase a lab-tested package facility. The small generators will be required to maintain records of required maintenance and testing and some will require the hiring of professionals to complete the maintenance and testing.

**c. Equipment, supplies, labor and increased administration required for compliance:**

Those small business or other customers who propose to interconnect a small generator facility will be required to comply with interconnection standards and procedures, and with operation, maintenance and testing standards. Most will either contract for design and installation or will purchase a lab-tested package facility. Some small generators will hire professionals to complete the testing and maintenance of their facilities.

**How were small businesses involved in the development of this rule?**

Over the past year and a half, the Commission held informal workshops, a formal public comment hearing and it solicited comments from the industry. Commentators included regulated electric companies, other electric utilities, and small generators, including small businesses.

Administrative Rule Advisory Committee consulted?:

 Yes  No

If not, why?:

Industry-wide workshops were held and both informal and formal comments were solicited from a large, diverse group of stakeholders.

6/11/2008

Close of Hearing

Diane Davis

diane.davis@state.or.us

04/15/2008

Last Day (m/d/yyyy) and Time  
for Public Comment

Printed Name

Email Address

Date Filed

Please enter date as m/d/yyyy or mm/dd/yyyy

## 860-082-0005

### Scope and Applicability

(1) OAR 860-082-0005 through 860-082-0080 (the “small generator interconnection rules”) establish rules governing the interconnection of a small generator facility with a nameplate capacity of 10 megawatts or less to a public utility’s transmission or distribution system. These rules do not apply if the interconnection between the small generator facility and the public utility is subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC).

(2) The small generator interconnection rules do not apply retroactively to a small generator facility that was interconnected to a public utility’s transmission or distribution system prior to the effective date of the small generator interconnection rules (an “existing small generator facility”). These rules become applicable to an existing small generator facility at the expiration of the agreement governing the terms of the interconnection of the existing small generator facility to the interconnected public utility’s transmission or distribution system. If an existing agreement does not have an expiration date, then the small generator interconnection rules become applicable to the existing small generator facility 10 years after the effective date of the rules. An existing small generator facility must submit an application under OAR 860-082-0020(1)(e) to the interconnected public utility on or before the date that the small generator interconnection rules become applicable.

(3) The small generator interconnection rules do not apply to the interconnection of a net metering facility, which is governed by OAR Chapter 860, Division 039.

(4) A small generator facility that qualifies as a “small power production facility” under OAR 860-029-0010(25) must also comply with the rules in OAR Chapter 860, Division 029. If there is a conflict between the small generator interconnection rules and the rules in OAR Chapter 860, Division 029, the small generator interconnection rules control.

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

Stats. Implemented: ORS 756.040, 756.060

Hist.: NEW

## 860-082-0010

### Waiver

(1) For good cause shown, a public utility, an applicant, or an interconnection customer may request that the Commission waive any of the small generator interconnection rules.

(2) A public utility and an applicant or interconnection customer may agree to reasonable extensions to the required times for notices and submissions of information in these rules without requesting a waiver from the Commission.

(a) If a public utility and an applicant or interconnection customer are unable to agree to waive a time line, then the public utility, applicant, or interconnection customer may request that the Commission grant a waiver.

(b) In deciding whether to grant a waiver of a time line, the Commission will consider the number of pending applications for interconnection review and the type of applications, including review level, facility type, and facility size.

(c) Waiver of a time line, whether by agreement or Commission order, does not affect an application's queue position.

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

Stats. Implemented: ORS 756.040, 756.060

Hist.: NEW

### 860-082-0015

#### Definitions

As used in 860-082-0005 through 860-082-0080:

(1) "Adverse system impact" means a negative effect caused by the interconnection of a small generator facility that may compromise the safety or reliability of a transmission or distribution system.

(2) "Affected system" means a transmission or distribution system, not owned or operated by the interconnecting public utility, which may experience an adverse system impact from the interconnection of a small generator facility.

(3) "Aggregated nameplate capacity" means the total combined nameplate capacity of:

(a) A proposed small generator facility;

(b) Existing small generator facilities, net metering facilities and FERC jurisdictional generators; and

(c) Small generator facilities, net metering facilities, and FERC jurisdictional generators that have pending completed applications with higher queue positions than the proposed small generator facility.

(4) "Applicant" means a person who has submitted an application to interconnect a small generator facility to a public utility's transmission or distribution system.

(5) "Application" means a written request to interconnect a small generator facility with a public utility's transmission or distribution system.

(6) "Area network" means a type of distribution system served by multiple transformers interconnected in an electrical network circuit in order to provide high reliability of service. This term has the same meaning as the term "secondary grid network" as defined in IEEE 1547, section 4.1.4 (published July 2003).

(7) "Certificate of completion" means a certificate signed by an applicant and an interconnecting public utility attesting that a small generator facility is complete, meets the applicable requirements of the small generator interconnection rules, and has been inspected, tested, and certified as physically ready for operation. A certificate of completion includes the "as built" specifications and initial settings for the small generator facility and its associated interconnection equipment.

(8) "Distribution system" means that portion of an electric system which delivers electricity from transformation points on the transmission system to points of connection on a customer's premises.

**(9) “Fault current” means an electrical current that flows through a circuit during a fault condition. A fault condition occurs when one or more electrical conductors contact ground or each other. Types of faults include phase to ground, double-phase to ground, three-phase to ground, phase to phase, and three-phase.**

**(10) “Field-tested equipment” means interconnection equipment that is identical to equipment that was approved by the interconnecting public utility for a different small generator facility interconnection under Tier 4 review and has successfully completed a witness test within three years from the date of the submission of the current application.**

**(11) “IEEE 1547” means the standards published in the 2003 edition of the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, titled “Interconnecting Distributed Resources with Electric Power Systems” and approved by the IEEE SA Standards Board on June 12, 2003.**

**(12) “IEEE 1547.1” means the standards published in the 2005 edition of the IEEE Standard 1547.1, titled “Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems” and approved by the IEEE SA Standards Board on June 9, 2005.**

**(13) “Interconnection agreement” means a contract between an applicant or interconnection customer and an interconnecting public utility that governs the interconnection of a small generator facility to the public utility’s transmission or distribution system and the ongoing operation of the small generator facility after it is interconnected.**

**(14) “Interconnection customer” means a person with one or more small generator facilities interconnected to a public utility’s transmission or distribution system.**

**(15) “Interconnection equipment” means a group of components or an integrated system provided by an interconnection customer or applicant to connect a small generator facility to a public utility’s transmission or distribution system, including all interface equipment such as switchgear, protective devices, inverters, or other interface devices.**

**(16) “Interconnection facilities” means the facilities and equipment required by a public utility to accommodate the interconnection of a small generator facility to the public utility’s transmission or distribution system and used exclusively for that interconnection. Interconnection facilities do not include system upgrades.**

**(17) “Interconnection service” means service to an interconnection customer connecting a small generator facility on the customer’s premises to a public utility’s transmission or distribution system.**

**(18) “Lab-tested equipment” means interconnection equipment that has been designed to comply with IEEE 1547, tested in accordance with IEEE 1547.1, and certified and labeled as compliant with these IEEE standards at the point of manufacture by a nationally recognized testing lab (NRTL). For interconnection equipment to be considered lab-tested equipment under these rules, the equipment must be used in a manner consistent with the certification.**

**(19) “Line section” means that portion of a public utility’s transmission or distribution system that is connected to an interconnection customer and bounded by automatic sectionalizing devices or the end of a distribution line.**

**(20) “Minor equipment modification” means a change to a small generator facility or its associated interconnection equipment that:**

**(a) Does not affect the application of the approval requirements in Tiers 1, 2, or 3;**

**(b) Does not, in the interconnecting public utility’s reasonable opinion, have a material impact on the safety or reliability of the public utility’s transmission or distribution system or an affected system; and**

**(c) Does not affect the nameplate capacity of a small generator facility.**

**(21) “Nameplate capacity” means the full-load electrical quantities assigned by a facility’s designer to a generator and its prime mover or other piece of electrical equipment, such as transformers and circuit breakers, under standardized conditions, as expressed in amperes, kilovoltamperes, kilowatts, volts, megawatts, or other appropriate units. Nameplate capacity is usually indicated on a nameplate attached to the individual machine or device.**

**(22) “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 set forth by the United States Occupational Safety and Health Administration.**

**(23) “Net metering facility” has the meaning set forth in ORS 757.300(1)(d).**

**(24) “Pending completed application” means an application for interconnection of a small generator facility, a net metering facility, or a FERC jurisdictional generator that an interconnecting public utility has deemed complete.**

**(25) “Person” has the meaning set forth in OAR 860-011-0035(8).**

**(26) “Point of interconnection” means the point where a small generator facility is electrically connected to a public utility’s transmission or distribution system. This term has the same meaning as “point of common coupling” as defined in IEEE 1547, section 3.1.13. This term does not have the same meaning as “point of common coupling” as defined in OAR 860-039-0005(3)(g).**

**(27) “Primary line” means a distribution line with an operating voltage greater than 480 volts.**

**(28) “Public utility” has the meaning set forth in ORS 757.005 and is limited to a public utility that provides electric service.**

**(29) “Queue position” means the order of a pending completed application, relative to all other pending completed applications, that is established based on the date and time that the interconnecting public utility received the completed applications, including application fees.**

**(30) “Scoping meeting” means an initial meeting between representatives of an applicant and an interconnecting public utility that is conducted to discuss alternative interconnection options; to exchange information, including any relevant transmission or distribution system data and earlier studies that would reasonably be expected to affect the interconnection options; to analyze such information; and to determine the potentially feasible points of interconnection.**

**(31) “Secondary line” means a service line with an operating voltage of 480 volts or less.**

**(32) “Small generator facility” means a facility for the production of electrical energy that has a nameplate capacity of 10 megawatts or less. A small generator facility**

does not include interconnection equipment, interconnection facilities, or system upgrades.

(33) “Spot network” means a type of transmission or distribution system that uses two or more intertied transformers protected by network protectors to supply an electrical network circuit. A spot network may be used to supply power to a single customer or a small group of customers.

(34) “System upgrade” means an addition or modification to a public utility’s transmission or distribution system or to an affected system that is required to accommodate the interconnection of a small generator facility. System upgrades do not include interconnection facilities.

(35) “Telemetry” means the remote communication from a small generator facility to a point on the public utility’s communication network where the data can be assimilated into the public utility’s grid operations if desired by the public utility.

(36) “Transmission line” means any electric line operating at or above 50,000 volts.

(37) “Transmission system” means a public utility’s high voltage facilities and equipment used to transport bulk power or to provide transmission service under the public utility’s open access transmission tariff.

(38) “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 does not meet the definition of lab-tested equipment, the witness test may, at the discretion of the public utility, also include a system design and production evaluation according to IEEE 1547, sections 5.1 and 5.2, as applicable to the specific interconnection equipment used.

(39) “Written notice” means a notice required by the small generator interconnection rules sent via First Class United States mail. The duty to provide written notice is deemed fulfilled on the day that the notice is deposited in the mail. A public utility and an applicant or interconnection customer may agree in writing to accept written notice via electronic mail. If using electronic mail by agreement, the duty to provide written notice is deemed fulfilled on the day the notice is sent. A public utility and an applicant or interconnection customer are responsible for informing one another of changes to the physical or electronic address used to receive notifications.

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

Stats. Implemented: ORS 756.040, 756.060

Hist.: NEW

860-082-0020

Applications to Interconnect a Small Generator Facility

(1) A person may not interconnect a small generator facility to a public utility’s transmission or distribution system without authorization from the public utility. To receive authorization, a person must submit an application to interconnect to the public utility pursuant to the small generator interconnection rules.

**(a) A person proposing to interconnect a new small generator facility to a public utility's transmission or distribution system must submit an application to the public utility.**

**(b) A person with an existing interconnected small generator facility who proposes to make any change to the facility, other than a minor equipment modification, must submit an application to the public utility. This includes changes affecting the nameplate capacity of the existing interconnected small generator facility.**

**(c) An applicant with a pending completed application to interconnect a small generator facility must submit a new application if the applicant proposes to make any change to the application other than a minor equipment modification. This includes changes affecting the nameplate capacity of the proposed small generator facility.**

**(A) The applicant relinquishes the queue position assigned to the pending completed application and the public utility assigns a new queue position based on the date and time the public utility receives the new application.**

**(B) If the new application is submitted within 30 business days of the date of submission of the original application, then the public utility must apply the original application fee to the application fee required for the new application.**

**(d) A person with a pending completed application to interconnect a net metering facility or a FERC jurisdictional generator who wishes to change the proposed facility to a small generator facility must submit a new application under the small generator interconnection rules.**

**(A) The applicant relinquishes the queue position assigned to the pending completed application and the public utility assigns a new queue position based on the date and time that the interconnecting public utility receives the small generator interconnection application.**

**(B) If the small generator interconnection application is received within 30 business days of the date of submission of the original net metering or FERC jurisdictional generator interconnection application, then the public utility must apply the original application fee to the application fee required for the new application.**

**(e) An interconnection customer must submit an application upon the expiration of the interconnection agreement between the interconnection customer and the interconnected public utility. The application must be submitted on or before interconnection agreement's expiration date.**

**(A) A public utility may not unreasonably refuse to grant an expedited review of an application to renew an existing small generator facility interconnection if there have been no changes to the small generator facility other than minor equipment modifications.**

**(B) A public utility may not require an existing small generator facility to undergo Tier 4 review if there have been no changes to the small generator facility other than minor equipment modifications and there have been no material changes to the portion of the public utility's transmission or distribution system affected by the interconnection of the small generator facility.**

**(C) A public utility may require the interconnection customer to pay for interconnection facilities, system upgrades, or changes to the small generator facility or its associated interconnection equipment that are necessary to bring the small generator**

**facility interconnection into compliance with the small generator interconnection rules or IEEE 1547 or 1547.1.**

**(2) All applications must be made using the appropriate application form and must follow the standard form applications developed by the public utility and approved by the Commission. The public utility must provide separate application forms for review under Tier 1 and for review under Tiers 2, 3, and 4. The public utility must provide a copy of an application form to any person upon request and must post copies of the application forms on the public utility's website.**

**(a) Applicants must use the Tier 1 application form for small generator facilities that will not be interconnected with a transmission line and will use lab-tested, inverter-based interconnection equipment with a nameplate capacity of 25 kilowatts or less.**

**(b) Applicants must use the form for review under Tiers 2, 3, or 4 for interconnection of all other small generator facilities.**

**(3) A public utility may require payment of a nonrefundable application processing fee. The amount of the fee depends upon the review tier requested in the application and is intended to cover the reasonable costs of processing and evaluating the application.**

**(a) The application fee may not exceed \$100 for Tier 1 review, \$500 for Tier 2 review, and \$1000 for review under Tiers 3 and 4.**

**(b) An application requiring detailed studies and engineering evaluations by the public utility may incur costs that are not covered by the application fee. The applicant is responsible for the additional costs. Before the public utility may assess any costs in excess of the application fee, the public utility must receive written authorization from the applicant. If the applicant does not authorize the additional costs, then the application is deemed withdrawn and the original application fee is forfeited.**

**(c) If an application is denied at one review tier, and the applicant resubmits the application at a higher review tier within 30 business days after the date the applicant received notification of the denial, then the applicant maintains the queue position assigned to the original application and the public utility must apply the original application fee and any other fees paid in conjunction with the original application to the fees applicable to the resubmitted application.**

**(4) If an applicant proposes to interconnect multiple small generator facilities to the public utility's transmission or distribution system at a single point of interconnection, then the public utility must evaluate the application based on the combined total nameplate capacity for all of the small generator facilities.**

**(5) Each public utility must designate an employee or office from which an applicant may obtain information on the small generator facility interconnection process and relevant information about the public utility's transmission or distribution system. Such information must include studies and other materials that may be used to understand the feasibility of interconnecting a small generator facility at a particular point on the public utility's transmission or distribution system, except to the extent that providing such materials would violate security requirements, confidentiality obligations, or be contrary to federal or state regulations. The public utility must comply with reasonable requests for access to or copies of such information, but may require a person receiving such information to sign a confidentiality agreement if**

required to protect the confidential or proprietary information of the public utility or a third party.

(6) An applicant must provide documentation of site control with an interconnection application. Site control may be demonstrated through ownership of the site, a leasehold interest in the site, or an option or other right to develop the site for the purpose of constructing the small generator facility. Site control may be documented by a property tax bill, deed, lease agreement, or other legally binding contract.

(7) A public utility may propose to interconnect multiple small generator facilities at a single point of interconnection to minimize costs, and an affected applicant or interconnection customer may not unreasonably refuse such a proposal. An applicant or interconnection customer may, however, elect to maintain a separate point of interconnection if the applicant or interconnection customer agrees to pay the entire cost of the separate interconnection facilities.

(8) Application review process.

(a) Within 10 business days of receipt of an application to interconnect a small generator facility, the interconnecting public utility must provide written notice to the applicant stating whether the application is complete.

(A) If the application is incomplete, then the public utility must provide the applicant with a detailed list of the information needed to complete the application. An application is deemed complete when the public utility receives the listed information. The applicant must provide the listed information within 10 business days of receipt of the list or the application is deemed withdrawn.

(B) If a public utility does not have a record of receipt of an application or cannot locate an application, then the applicant must provide an additional copy of the application to the public utility. If the applicant can demonstrate that a complete application was originally delivered to the public utility at a particular time on a particular date, then the public utility must assign a queue position to the application based on the original time and date of delivery.

(b) Once the public utility deems an application to be complete, the public utility must assign the application a queue position. An applicant must meet all applicable deadlines in the small generator interconnection rules to maintain its queue position unless the deadlines have been waived by agreement with the interconnecting public utility or by Commission order.

(c) If the public utility determines during the evaluation process that supplemental or clarifying information is required, then the public utility must request the information from the applicant. The time necessary to complete the evaluation of the application may be extended by the time required for the receipt of the additional information. Requests for information do not affect the applicant's queue position.

(d) A public utility must use IEEE 1547 and IEEE 1547.1 to evaluate small generator interconnection applications unless otherwise specified in these rules or unless the Commission grants a waiver to use different or additional standards.

(e) A public utility must provide an executable interconnection agreement no later than five business days after the date of approval of an interconnection application. The interconnection agreement must follow the standard form agreement developed by the public utility and approved by the Commission. The applicant must return an executed interconnection agreement to the public utility or request negotiation of a non-

**standard interconnection agreement within 15 business days of receipt or the application is deemed withdrawn.**

**(A) An applicant is entitled to the terms in the standard form agreement, but may choose to negotiate with an interconnecting public utility for variations to the standard agreement terms.**

**(B) If negotiated changes to a standard interconnection agreement are materially inconsistent with the small generator interconnection rules, then the applicant and the public utility must seek Commission approval of the negotiated interconnection agreement.**

**(f) The applicant must provide the public utility written notice at least 20 business days before the planned commissioning for the small generator facility.**

**(A) The public utility has the option of conducting a witness test at a mutually agreeable time within 10 business days of the scheduled commissioning.**

**(B) The public utility must provide written notice to the applicant indicating whether the public utility plans to conduct a witness test or will waive the witness test.**

**(C) If the public utility notifies the applicant that it plans to conduct a witness test, but fails to conduct the witness test within 10 business days of the scheduled commissioning date or within a time otherwise agreed upon by the applicant and the public utility, then the witness test is deemed waived.**

**(D) If the witness test is conducted and is not acceptable to the public utility, then the public utility must provide written notice to the applicant describing the deficiencies within five business days of conducting the witness test. The public utility must give the applicant 30 calendar days from the date of the applicant's receipt of the notice to resolve the deficiencies. If the applicant fails to resolve the deficiencies to the satisfaction of the public utility within 30 calendar days, then the application is deemed withdrawn.**

**(g) A public utility must meet all applicable deadlines in the small generator interconnection rules unless the deadlines have been waived by agreement with an applicant or interconnection customer or by Commission order. If the public utility cannot meet an applicable deadline, then the public utility must provide written notice to the applicant or interconnection customer, explaining the reasons for the failure to meet the deadline and an estimated alternative deadline. A public utility's failure to meet an applicable deadline does not affect an applicant's queue position.**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

**860-082-0025**

**Construction, Operation, Maintenance, and Testing of Small Generator Facilities**

**(1) An interconnection customer or applicant must construct, operate, and maintain a small generator facility and its associated interconnection equipment in compliance with IEEE 1547 and 1547.1.**

**(2) The applicant must provide written notice to the interconnecting public utility 10 business days before beginning operation of an approved small generator facility.**

**(3) Before beginning operation of a small generator facility, an interconnection customer or applicant must receive approval of the facility under the small generator interconnection rules and must execute an interconnection agreement with the interconnecting public utility. Applicants or interconnection customers are entitled to a maximum 20-year term for an interconnection agreement.**

**(4) A small generator facility must be capable of being isolated from the interconnecting public utility's transmission or distribution system.**

**(a) For small generator facilities interconnecting to a primary line, the interconnection customer or applicant must use a lockable, visible-break isolation device readily accessible to the public utility.**

**(b) For small generator facilities interconnecting to a secondary line, the interconnection customer or applicant must use a lockable isolation device whose status is clearly indicated and is readily accessible by the public utility. An exception from this requirement is allowed for a small generator facility that has a maximum total output of 30 amperes or less, is connected to a secondary line, uses lab-tested, inverter-based interconnection equipment, and is interconnected to the distribution system through a metered service owned by the interconnected public utility. In this limited case, the meter base may serve as the required isolation device if it is readily accessible to the public utility.**

**(c) Other than the exception in (3)(b), all isolation devices must be installed, owned, and maintained by the interconnection customer or applicant; must 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.**

**(B) Alternatively, the interconnection customer or applicant may elect to provide the public utility 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 public utility. The interconnection customer or applicant must provide a lockbox capable of accepting a lock provided by the public utility that provides ready access to the isolation device. The interconnection customer or customer must install the lockbox in a location that is readily accessible by the public utility and must affix a placard in a location acceptable to the public utility that provides clear instructions to utility personnel on how to access to the isolation device.**

**(5) An interconnecting public utility must have access to an interconnection customer's or an applicant's premises for any reasonable purpose related to an interconnection application or an interconnected small generator facility. The public utility must request access at reasonable hours and upon reasonable notice. In the event of an emergency or hazardous condition, the public utility may access the interconnection customer's or applicant's premises at any time without prior notice, but the public utility must provide written notice within five business days after entering the interconnection customer's or applicant's premises that describes the date of entry, the purpose of the entry, and any actions performed on the premises.**

**(6) When a small generator facility undergoes maintenance or testing in accordance with the requirements of the small generator interconnection rules or IEEE 1547 or 1547.1, the interconnection customer must retain written records for at least seven years documenting the maintenance and the results of testing.**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

**860-082-0030**

**Cost Responsibility**

**(1) Study costs. Whenever additional studies are required under the small generator interconnection rules, the applicant must pay any study costs exceeding the application fee. The public utility must base study costs on the scope of work determined and documented in the feasibility study agreement, the system impact study agreement, or the facilities study agreement, as applicable. The estimated engineering costs used in calculating study costs must not exceed \$100 per hour. Before beginning a study, a public utility may require an applicant to pay a deposit of up to 50 percent of the estimated costs to perform the study or \$1000, whichever is less.**

**(2) Interconnection facilities. For interconnection review under Tier 4, a public utility must identify the interconnection facilities necessary to safely interconnect the small generator facility with the public utility's transmission or distribution system. The applicant must pay the costs of the interconnection facilities.**

**(3) Interconnection equipment. An applicant or interconnection customer must pay all expenses, including overhead expenses, associated with constructing, owning, operating, maintaining, repairing, and replacing its interconnection equipment.**

**(4) System upgrades. A public utility must design, procure, construct, install, and own any system upgrades necessitated by the interconnection of a small generator facility to the public utility's transmission or distribution system. A public utility must identify any adverse system impacts on an affected system caused by the interconnection of a small generator facility to the public utility's transmission or distribution system. The public utility must determine what actions or upgrades are required to mitigate these impacts. Such mitigation measures are considered system upgrades as defined in these rules. The applicant must pay the costs of any system upgrades.**

**(5) A public utility may not commence work on interconnection facilities or system upgrades before an applicant receives the public utility's good-faith, non-binding cost estimate and provides written notice to the public utility that the applicant accepts the estimate and agrees to pay the costs. A public utility may require an applicant to pay a deposit before commencing work on the interconnection facilities or system upgrades.**

**(a) If an applicant agrees to make progress payments on a schedule established by the applicant and the interconnecting public utility, then the public utility may require the applicant to pay a deposit of up to 25 percent of the estimated costs or \$10,000,**

whichever is less. The public utility and the applicant must agree on progress billing, final billing, and payment schedules before the public utility commences work.

(b) If an applicant does not agree to make progress payments, then the public utility may require the applicant to pay a deposit of up to 100 percent of the estimated costs. If the actual costs are lower than the estimated costs, then the public utility must refund the unused portion of the deposit to the applicant.

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

Stats. Implemented: ORS 756.040, 756.060

Hist.: NEW

### 860-082-0035

#### Insurance

(1) A public utility may not require an applicant or an interconnection customer with a small generator facility with a nameplate capacity of 200 kilowatts or less to obtain liability insurance in order to interconnect with the public utility's transmission or distribution system.

(2) A public utility may require an applicant or an interconnection customer with a small generator facility with a nameplate capacity greater than 200 kilowatts to obtain prudent amounts of general liability insurance in order to interconnect to the public utility's transmission or distribution system.

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

Stats. Implemented: ORS 756.040, 756.060

Hist.: NEW

### 860-082-0040

#### Tier 1 Interconnection Review

(1) A public utility must use the Tier 1 review procedures for an application to interconnect a small generator facility that meets the following requirements:

(a) The small generator facility must use lab-tested, inverter-based interconnection equipment;

(b) The small generator facility must have a nameplate capacity of 25 kilowatts or less; and

(c) The small generator facility must not be interconnected to a transmission line.

(2) Tier 1 Approval Criteria. A public utility must approve an application for interconnection under the Tier 1 interconnection review procedures if the small generator facility meets the approval criteria in subsections (a) through (e). A public utility may not impose different or additional approval criteria.

(a) A Tier 1 small generator facility interconnection must use existing public utility facilities.

**(b) For interconnection of a small generator facility to a radial distribution circuit, the aggregated nameplate capacity 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.**

**(c) For interconnection of a small generator facility to the load side of spot network protectors, the aggregated nameplate capacity on the load side of the spot network protectors must not exceed five percent of a spot network's maximum load or 50 kilowatts, whichever is less.**

**(d) For interconnection of a small generator facility to a single-phase shared secondary line, the aggregated nameplate capacity on the line must not exceed 20 kilowatts.**

**(e) For interconnection of a single-phase small generator facility to the center tap neutral of a 240-volt service line, the addition of the small generator facility must not create a current imbalance between the two sides of the 240-volt service line of more than 20 percent of the nameplate rating of the service transformer.**

**(3) In addition to the time lines in OAR 860-082-0020(8), the public utility must provide written notice to the applicant stating whether the small generator facility meets the approval criteria no later than 15 business days from the date a Tier 1 interconnection application is deemed complete.**

**(4) The interconnection process is not complete until:**

**(a) The public utility approves the application;**

**(b) The witness test, if conducted by the public utility, is successful; and**

**(c) The applicant and public utility execute a certificate of completion. The certificate of completion must follow the standard form certificate developed by the public utility and approved by the Commission.**

**(5) If a small generator facility is not approved under the Tier 1 interconnection review procedure, then the applicant may submit a new application under the Tier 2, Tier 3, or Tier 4 review procedures. At the applicant's request, the public utility must provide a written explanation of the reasons for denial within 10 business days of the applicant's request.**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

## **860-082-0045**

### **Tier 2 Interconnection Review**

**(1) A public utility must use the Tier 2 interconnection review procedures for an application to interconnect a small generator facility that meets the following requirements:**

**(a) The small generator facility does not qualify for or failed to meet the Tier 1 interconnection review requirements;**

**(b) The small generator facility must have a nameplate capacity of 2 megawatts or less;**

**(c) The small generator facility must be interconnected to either a radial distribution circuit or a spot network distribution circuit limited to serving one customer;**

**(d) The small generator facility must not be interconnected to a transmission line; and**

**(e) The small generator facility must use interconnection equipment that is either lab-tested equipment or field-tested equipment. For equipment to gain status as field-tested equipment, the applicant must provide all the documentation from the prior Tier 4 study, review, and approval, including any interconnection studies and the certificate of completion.**

**(2) Tier 2 Approval Criteria. A public utility must approve an application to interconnect a small generator facility under the Tier 2 interconnection review procedures if the facility meets the approval criteria in subsections (a) through (l). A public utility may not impose different or additional approval criteria.**

**(a) For interconnection of a small generator facility to a radial distribution circuit, the aggregated nameplate capacity 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 small generator facility to the load side of spot network protectors, the aggregated nameplate capacity on the load side of the spot network protectors must not exceed the lesser of five percent of a spot network's maximum load or 50 kilowatts.**

**(c) The aggregated nameplate capacity 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 aggregated nameplate capacity on the distribution circuit must not cause any distribution protective devices and equipment (including substation breakers, fuse cutouts, and line reclosers) or other public utility equipment on the transmission or distribution system to be exposed to fault currents exceeding 90 percent of the short circuit interrupting capability. 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 aggregated nameplate capacity on the distribution side of a substation transformer feeding the circuit where the small generator facility proposes to interconnect must not exceed 10 megawatts in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (for example, three or four distribution busses from the point of interconnection).**

**(f) If the small generator facility interconnection is to a primary line on the distribution system, the interconnection must meet the following criteria:**

**(A) If the small generator facility is three-phase or single-phase and will be connected to a three-phase, three-wire primary line, then the small generator facility must be connected phase-to-phase.**

**(B) If the small generator facility is three-phase or single-phase and will be connected to a three-phase, four-wire primary line, then the small generator facility must be connected line-to-neutral and effectively grounded.**

(g) For interconnection of a small generator facility to a single-phase shared service line on the transmission or distribution system, the aggregated nameplate capacity on the shared secondary line must not exceed 20 kilowatts.

(h) For interconnection of a single-phase small generator facility to the center tap neutral of a 240-volt service line, the addition of the small generator facility must not create a current imbalance between the two sides of the 240-volt service line of more than 20 percent of the nameplate rating of the service transformer.

(i) Except as provided in subsection (2)(l), the interconnection of the small generator facility must not require system upgrades or interconnection facilities different from or in addition to the applicant's proposed interconnection equipment.

(j) The aggregated nameplate capacity, in combination with exiting transmission loads, must not cause the transmission system circuit directly connected to the distribution circuit where the small generator facility interconnection is proposed to exceed its design capacity.

(k) If the public utility's distribution circuit uses high speed reclosing with less than two seconds of interruption, then the small generator facility must not be a synchronous machine. If the small generator facility is a synchronous machine, then the applicant must submit a Tier 4 application.

(l) If the small generator facility fails to meet one or more of the criteria in subsections (2)(a) through (k), but the public utility determines that the small generator facility could be interconnected safely if minor modifications to the transmission or distribution system were made (for example, changing meters, fuses, or relay settings), then the public utility must offer the applicant a good-faith, non-binding estimate of the costs of such proposed minor modifications. If the applicant authorizes the public utility to proceed with the minor modifications and agrees to pay the entire cost of the modifications, then the public utility must approve the application under Tier 2.

(3) In addition to the time lines and requirements in OAR 860-082-0020, the following time lines and requirements apply to Tier 2 interconnection reviews:

(a) A public utility must schedule a scoping meeting within 10 business days after notifying an applicant that its application is complete. The public utility and the applicant may agree to waive the scoping meeting requirement.

(b) Within 20 business days after a public utility notifies an applicant that its application is complete, the public utility must:

(A) Evaluate the application using the Tier 2 approval criteria in section (2);

(B) Review any independent analysis of the proposed interconnection provided by the applicant that was performed using the Tier 2 approval criteria; and

(C) Provide written notice to the applicant stating whether the public utility approved the application. If applicable, the public utility must include a comparison of its evaluation to the applicant's independent analysis.

(4) The interconnection process is not complete until:

(a) The public utility approves the application;

(b) Any minor modifications to the transmission or distribution system required under subsection (2)(l) are complete;

(c) The witness test, if conducted by the public utility, is successful; and

**(d) The applicant and public utility execute a certificate of completion. The certificate of completion must follow the standard form certificate developed by the public utility and approved by the Commission.**

**(5) If a small generator facility is not approved under the Tier 2 interconnection review procedure, then the applicant may submit a new application under the Tier 3 or Tier 4 review procedures. At the applicant's request, the public utility must provide a written explanation of the reasons for denial within 10 business days of the applicant's request.**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

**860-082-0050**

**Tier 3 Interconnection Review**

**(1) A public utility must use the Tier 3 interconnection review procedures for an application to interconnect a small generator facility that meets the following requirements:**

**(a) The small generator facility does not qualify for or failed to meet the Tier 1 or Tier 2 interconnection review requirements;**

**(b) The small generator facility must have a nameplate capacity of 10 megawatts or less;**

**(c) The small generator facility must not be connected to a transmission line;**

**(d) The small generator facility must not export power beyond the point of interconnection; and**

**(e) The small generator facility must use low forward power relays or other protection functions that prevent power flow onto the area network.**

**(2) Tier 3 Approval Criteria. A public utility must approve an application to interconnect a small generator facility under the Tier 3 interconnection review procedures if the facility meets the Tier 2 approval criteria in OAR 860-082-0045(2) and the additional approval criteria in subsections (a), (b), or (c). A public utility may not impose different or additional approval criteria.**

**(a) For a small generator facility to interconnect to the load side of an area network distribution circuit, the small generator facility must meet the following criteria:**

**(A) The nameplate capacity of the small generator facility must be 50 kilowatts or less;**

**(B) The small generator facility must use lab-tested, inverter-based interconnection equipment;**

**(C) The aggregated nameplate capacity on the area network must not exceed five percent of an area network's maximum load or 50 kilowatts, whichever is less; and**

**(D) Except as allowed in subsection (2)(c), the interconnection of the small generator facility must not require system upgrades or interconnection facilities different from or in addition to the applicant's proposed interconnection equipment.**

**(b) For a small generator facility to interconnect to a distribution circuit that is not networked, the small generator facility must meet the following criteria:**

**(A) The small generator facility must have a nameplate capacity of 10 megawatts or less;**

**(B) The aggregated nameplate capacity on the circuit must be 10 megawatts or less;**

**(C) The small generator facility must not export power beyond the point of interconnection;**

**(D) The small generator facility's point of interconnection must be to a radial distribution circuit;**

**(E) The small generator facility must not be served by a shared transformer;**

**(F) Except as allowed in subsection (2)(c), the interconnection of the small generator facility must not require system upgrades or interconnection facilities different from or in addition to the applicant's proposed interconnection equipment; and**

**(G) If the public utility's distribution circuit uses high speed reclosing with less than two seconds of interruption, then the small generator facility must not be a synchronous machine. If the small generator facility is a synchronous machine, then the applicant must submit a Tier 4 application.**

**(c) If the small generator facility fails to meet one or more of the approval requirements in subsection (2)(a) or (b), but the public utility determines that the small generator facility could be interconnected safely if minor modifications to the transmission or distribution system were made (for example, changing meters, fuses, or relay settings), then the public utility must offer the applicant a good-faith, non-binding estimate of the costs of such proposed minor modifications. If the applicant authorizes the public utility to proceed with the minor modifications and agrees to pay the entire cost of the modifications, then the public utility must approve the application under Tier 3.**

**(3) In addition to the time lines and requirements in OAR 860-082-0020, the following time lines and requirements apply to Tier 3 interconnection reviews:**

**(a) An interconnecting public utility must schedule a scoping meeting within 10 business days after notifying an applicant that its application is complete. The public utility and the applicant may agree to waive the scoping meeting requirement.**

**(b) Within 20 business days after a public utility notifies an applicant its application is complete, the public utility must:**

**(A) Evaluate the application using the Tier 3 approval criteria;**

**(B) Review any independent analysis of the proposed interconnection provided by the applicant that was performed using the Tier 3 approval criteria; and**

**(C) Provide written notice to the applicant stating whether the public utility approved the application. If applicable, the public utility must include a comparison of its evaluation to the applicant's independent evaluation.**

**(4) The interconnection process is not complete until:**

**(a) The public utility approves the application;**

**(b) Any minor modifications to the transmission or distribution system required under subsection (2)(c) are complete;**

**(c) The witness test, if conducted by the public utility, is successful; and**

**(d) The applicant and public utility execute a certificate of completion. The certificate of completion must follow the standard form certificate developed by the public utility and approved by the Commission.**

**(5) If a small generator facility is not approved under the Tier 3 interconnection review procedures, then the applicant may submit a new application under the Tier 4 review procedures. At the applicant's request, the public utility must provide a written explanation of the reasons for denial within 10 business days of the applicant's request.**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

### **OAR 860-082-0055**

#### **Tier 4 Interconnection Review**

**(1) A public utility must use the Tier 4 interconnection review procedures for an application to interconnect a small generator facility that meets the following requirements:**

**(a) The small generator facility does not qualify for or failed to meet the Tier 1, Tier 2, or Tier 3 interconnection review requirements; and**

**(b) The small generator facility must have a nameplate capacity of 10 megawatts or less.**

**(2) A public utility must approve an application to interconnect a small generator facility under the Tier 4 interconnection review procedures if the public utility determines that the safety and reliability of the public utility's transmission or distribution system will not be compromised by interconnecting the small generator facility. The applicant must pay the costs of any interconnection facilities or system upgrades necessitated by the interconnection.**

**(3) In addition to the time lines and requirements in OAR 860-082-0020, the time lines and requirements in subsections (5) through (12) apply to Tier 4 interconnection reviews.**

**(4) A public utility and an applicant may agree to waive the requirement for a scoping meeting, the feasibility study, the system impact study, or the facilities study.**

**(5) A public utility must schedule a scoping meeting within 10 business days after notifying an applicant that its application is complete.**

**(a) The public utility and the applicant must bring to the scoping meeting all personnel, including system engineers, as may be reasonably required to accomplish the purpose of the meeting.**

**(b) The public utility and applicant must discuss whether the public utility should perform a feasibility study or proceed directly to a system impact study, a facilities study, or an interconnection agreement.**

**(c) If the public utility determines that no studies are necessary, then the public utility must approve the application within 15 business days of the scoping meeting if:**

**(A) The application meets the criteria in subsection (2); and**

**(B) The interconnection of the small generator facility does not require system upgrades or interconnection facilities different from or in addition to the applicant's proposed interconnection equipment.**

**(d) If the public utility determines that no studies are necessary and that the small generator facility could be interconnected safely if minor modifications to the transmission or distribution system were made (for example, changing meters, fuses, or relay settings), then the public utility must offer the applicant a good-faith, non-binding estimate of the costs of such proposed minor modifications. If the applicant authorizes the public utility to proceed with the minor modifications and agrees to pay the entire cost of the modifications, then the public utility must approve the application within 15 business days of receipt of the applicant's agreement to pay for the minor modifications.**

**(6) If a public utility reasonably concludes that an adequate evaluation of an application requires a feasibility study, then the public utility must provide the applicant with an executable feasibility study agreement within five business days of the date of the scoping meeting.**

**(a) The feasibility study agreement must include a detailed scope for the feasibility study, a reasonable schedule for completion of the study, and a good-faith, non-binding estimate of the costs to perform the study.**

**(b) The feasibility study agreement must follow the standard form agreement developed by the public utility and approved by the Commission.**

**(c) The applicant must execute the feasibility study agreement within 15 business days of receipt of the agreement or the application is deemed withdrawn.**

**(d) The public utility must make reasonable, good-faith efforts to follow the schedule set forth in the feasibility study agreement for completion of the study.**

**(e) The feasibility study must identify any potential adverse system impacts on the public utility's transmission or distribution system or an affected system that may result from the interconnection of the small generator facility. In determining possible adverse system impacts, the public utility must consider the aggregated nameplate capacity of all generating facilities that, on the date the feasibility study is commenced, are directly interconnected to the public utility's transmission or distribution system, have a completed pending application to interconnect with a higher queue position, or have an executed interconnection agreement with the public utility.**

**(f) The public utility must evaluate multiple potential points of interconnection at the applicant's request. The applicant must pay the costs of this additional evaluation.**

**(g) The public utility must provide a copy of the feasibility study to the applicant within five business days of the study's completion.**

**(h) If the feasibility study identifies any potential adverse system impacts, then the public utility must perform a system impact study.**

**(i) If the feasibility study does not identify any adverse system impacts, then the public utility must perform a facilities study if the public utility reasonably concludes that a facilities study is necessary to adequately evaluate the application.**

**(A) If the public utility concludes that a facilities study is not required, then the public utility must approve the application with 15 business days of completion of the feasibility study if the application meets the criteria in section (2) and the interconnection of the small generator facility does not require system upgrades or**

**interconnection facilities different from or in addition to the applicant's proposed interconnection equipment.**

**(B) If the public utility concludes that a facilities study is not required and that the small generator facility could be interconnected safely if minor modifications to the transmission or distribution system were made (for example, changing meters, fuses, or relay settings), then the public utility must offer the applicant a good-faith, non-binding estimate of the costs of such proposed minor modifications. If the applicant authorizes the public utility to proceed with the minor modifications and agrees to pay the entire cost of the modifications, then the public utility must approve the application within 15 business days of receipt of the applicant's agreement to pay for the minor modifications.**

**(7) If a public utility is required to perform a system impact study under subsection (6)(h), or if an applicant and a public utility agree in the scoping meeting to waive the feasibility study and proceed directly to the system impact study, then the public utility must provide the applicant with an executable system impact study agreement within five business days of completing the feasibility study or within five business days from the date of the scoping meeting, whichever is applicable.**

**(a) The system impact study agreement must include a detailed scope for the system impact study, a reasonable schedule for completion of the study, and a good-faith, non-binding estimate of the costs to perform the study.**

**(b) The system impact study agreement must follow the standard form agreement developed by the public utility and approved by the Commission.**

**(c) The applicant must execute the system impact study agreement within 15 business days of receipt of the agreement or the application is deemed withdrawn.**

**(d) The public utility must make reasonable, good-faith efforts to follow the schedule set forth in the system impact study agreement for completion of the study.**

**(e) The system impact study must identify and detail the impacts on the public utility's transmission or distribution system or on an affected system that would result from the interconnection of the small generator facility if no modifications to the small generator facility or system upgrades were made. The system impact study must include evaluation of the adverse system impacts identified in the feasibility study and in the scoping meeting.**

**(f) In determining possible adverse system impacts, the public utility must consider the aggregated nameplate capacity of all generating facilities that, on the date the system impact study is commenced, are directly interconnected to the public utility's transmission or distribution system, have a completed pending application to interconnect with a higher queue position, or have an executed interconnection agreement with the public utility.**

**(g) The system impact study must include:**

**(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;**

**(F) Grounding reviews;**

**(G) The underlying assumptions of the study;**

**(H) The results of the analyses; and**

**(I) Any potential impediments to providing the requested interconnection service.**

**(h) If an applicant provides an independent system impact study to the public utility, then the public utility must evaluate and address any alternative findings from that study.**

**(i) The public utility must provide a copy of the system impact study to the applicant within five business days of completing the study.**

**(j) If a public utility determines in a system impact study that interconnection facilities or system upgrades are necessary to safely interconnect a small generator facility, then the public utility must perform a facilities study.**

**(k) If the public utility determines that no interconnection facilities or system upgrades are required, and the public utility concludes that the application meets the criteria in section (2), then the public utility must approve the application with 15 business days of completion of the system impact study.**

**(l) If the public utility determines that no interconnection facilities or system upgrades are required and that the small generator facility could be interconnected safely if minor modifications to the transmission or distribution system were made (for example, changing meters, fuses, or relay settings), then the public utility must offer the applicant a good-faith, non-binding estimate of the costs of such proposed minor modifications. If the applicant authorizes the public utility to proceed with the minor modifications and agrees to pay the entire cost of the modifications, then the public utility must approve the application within 15 business days of the applicant's agreement to pay for the minor modifications.**

**(8) If a public utility is required to perform a facilities study under subsection (7)(j), or if an applicant and a public utility agree in the scoping meeting to waive the system impact study and proceed directly to the facilities study, then the public utility must provide the applicant with an executable facilities study agreement within five business days of completing the system impact study or within five business days from the date of the scoping meeting, whichever is applicable.**

**(a) The facilities study agreement must include a detailed scope for the facilities study, a reasonable schedule for completion of the study, and a good-faith, non-binding estimate of the costs to perform the study.**

**(b) The facilities study agreement must follow the standard form agreement developed by the public utility and approved by the Commission.**

**(c) The applicant must execute the interconnection facilities study agreement within 15 business days after receipt of the agreement or the application is deemed withdrawn.**

**(d) The public utility must make reasonable, good-faith efforts to follow the schedule set forth in the facilities study agreement for completion of the study.**

**(e) The facilities study must identify the interconnection facilities and system upgrades required to safely interconnect the small generator facility and must determine the costs for the facilities and upgrades, including equipment, engineering, procurement, and construction costs. Design for any required interconnection facilities or system upgrades must be performed under the facilities study agreement. The public utility must also identify the electrical switching configuration of the equipment, including transformer, switchgear, meters, and other station equipment.**

**(f) The public utility may contract with third-party consultants to complete the interconnection facilities and system upgrades identified in the facilities study. A public utility and an applicant may agree in writing to allow the applicant to hire a third party consultant to complete the interconnection facilities and system upgrades, subject to public utility oversight.**

**(g) The interconnection facilities study must include a detailed estimate of the time required to procure, construct, and install the required interconnection facilities and system upgrades.**

**(h) If the applicant agrees to pay for the interconnection facilities and system upgrades identified in the facilities study, then the public utility must approve the application within 15 business days of the applicant's agreement.**

**(9) The interconnection process is not complete until:**

**(a) The public utility approves the application;**

**(b) Any interconnection facilities or system upgrades have been completed;**

**(c) Any minor modifications to the public utility's transmission or distribution system required under subsections (5)(d), 6(i)(B), or (7)(l) have been completed;**

**(d) The witness test, if conducted by the public utility, is successful; and**

**(e) The applicant and public utility execute a certificate of completion.**

**(10) If a small generator facility is not approved under the Tier 4 interconnection review procedures, then the public utility must provide a written explanation of the denial to the applicant.**

**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 public utility must maintain a record of the following information for at least two years:**

**(a) The number of completed small generator interconnection applications received;**

**(b) The time required to complete the review process for each application; and**

**(c) The reasons for the approval or denial of each application.**

**(2) For as long as an interconnection customer's small generator facility is interconnected to a public utility's transmission or distribution system, the interconnecting public utility must maintain copies of the interconnection application, interconnection agreement, and certificate of completion for the small generator facility. The public utility must provide a copy of the interconnection customer's records to the interconnection customer within 15 business days after receipt of a written request.**

**(3) The public utility must submit an annual report to the Commission summarizing the public utility's interconnection activities. The annual report must include the following minimum information:**

**(a) The number of complete small generator interconnection applications received;**

- (b) The number of small generator facility interconnections completed;
- (c) The types of small generator facilities applying for interconnection and the nameplate capacity of the facilities;
- (d) The location of completed and proposed small generator facilities by zip code;
- (e) For each Tier 3 and Tier 4 small generator interconnection approval, the basic telemetry configuration, if applicable; and
- (f) For each Tier 4 small generator interconnection approval:
  - (A) The interconnection facilities required to accommodate the interconnection of the small generator facility and the estimated costs of those facilities; and
  - (B) The system upgrades required to accommodate the interconnection of the small generator facility and the estimated costs of those upgrades.

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

Stats. Implemented: ORS 756.040, 756.060

Hist.: NEW

#### 860-082-0065

##### Metering and Monitoring

(1) The public utility must install, maintain, test, repair, operate, and replace any special metering and data acquisition equipment necessary under the terms of the public utility's interconnection agreement, power purchase agreement, or power service agreement with an applicant or interconnection customer. The applicant or interconnection customer is responsible for all costs associated with the special metering and data acquisition equipment. The public utility and the applicant or interconnection customer must have unrestricted access to such equipment as necessary to conduct routine business or respond to an emergency.

(2) Except as provided in subsection 3(b), a public utility may not require an applicant or interconnection customer with a small generator facility with a nameplate capacity of three megawatts or less to provide or pay for the data acquisition or telemetry equipment necessary to allow the public utility to remotely monitor the small generator facility's electric output.

(3) At its discretion, a public utility may require an applicant or interconnection customer to pay for the purchase, installation, operation, and maintenance of the data acquisition or telemetry equipment necessary to allow the public utility to remotely monitor the small generator facility's electric output if:

(a) The small generator facility has a nameplate capacity greater than 3 megawatts;  
or

(b) The small generator facility meets the criteria in OAR 860-082-0050(1) for Tier 3 interconnection review and the aggregated nameplate generation on the circuit exceeds 50 percent of the line section annual peak load.

(4) A public utility and an applicant or interconnection customer may agree to waive or modify the telemetry requirements in this rule.

(5) Telemetry Requirements.

**(a) The communication must take place via a private network link using a frame relay, fractional T-1 line, or other suitable device. Dedicated remote terminal units from the interconnected small generator facility to a public utility's substation and energy management system are not required.**

**(b) A single communication circuit from the small generator facility to the public utility is sufficient.**

**(c) Communications protocol must be DNP 3.0 or other standard used by the public utility.**

**(d) The small generator facility must be capable of sending telemetric monitoring data to the public utility at a minimum rate of every two seconds from the output of the small generator facility's telemetry equipment to the public utility's energy management system.**

**(e) A small generator facility is required to provide the following minimum data to the public utility:**

**(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 heartbeat (used to certify the telemetric signal quality);**

**and**

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

**(f) If an applicant or interconnection customer operates the equipment associated with the high voltage switchyard interconnecting the small generator facility to the transmission or distribution system and is required to provide monitoring and telemetry, then the interconnection customer must provide the following data to the public utility in addition to the data in subsection (e):**

**(A) Switchyard line and transformer megawatt and mega volt ampere reactive values;**

**(B) Switchyard bus voltage; and**

**(C) Switching device status**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

**860-082-0070**

**Temporary Disconnection**

**(1) Under emergency conditions, a public utility or an interconnection customer may suspend interconnection service and temporarily disconnect a small generator facility from the public utility's transmission or distribution system at any time and for as long as reasonably necessary.**

**(a) A public utility must notify an interconnection customer immediately after becoming aware of an emergency condition that may reasonably be expected to affect a small generator facility's operation. To the extent possible, the notice must describe the emergency condition, the extent of the damage or deficiency, the expected effect on the**

small generator facility, the anticipated duration of the condition, and the necessary corrective action.

(b) An interconnection customer must notify the public utility immediately after becoming aware of an emergency condition that may reasonably be expected to affect the public utility's transmission or distribution system. To the extent possible, the notice must describe the emergency condition, the extent of the damage or deficiency, the expected effect on the public utility's transmission or distribution system, the anticipated duration of the condition, and the necessary corrective action.

(2) A public utility or an interconnection customer may suspend interconnection service and temporarily disconnect a small generator facility to perform routine maintenance, construction, or repairs. A public utility or an interconnection customer must provide written notice five business days before suspending interconnection service or temporarily disconnecting the small generator facility. A public utility and an interconnection customer must use reasonable efforts to coordinate interruptions caused by routine maintenance, construction, or repairs.

(3) A public utility must use reasonable efforts to provide written notice to an interconnection customer affected by a forced outage of the public utility's transmission or distribution system at least five business days before the forced outage. If prior written notice is not given, then the public utility must provide the interconnection customer written documentation explaining the circumstances of the disconnection within five business days after the forced outage.

(4) A public utility may disconnect a small generator facility if the public utility determines that operation of the small generator facility will likely cause disruption or deterioration of service to other customers served by the public utility's transmission or distribution system, or if the public utility determines that operation of the small generator facility could cause damage to the public utility's transmission or distribution system.

(a) The public utility must provide written notice to the interconnection customer of the disconnection at least five business days before the disconnection. If the condition requiring disconnection can be remedied, then the public utility must describe the remedial action necessary.

(b) If requested by the interconnection customer, the public utility must provide documentation supporting the public utility's decision to disconnect.

(c) The public utility may disconnect the small generator facility if the interconnection customer fails to perform the remedial action identified in the notice of disconnection within a reasonable time, but no less than five business days after the interconnection customer received the notice of disconnection.

(5) A public utility may temporarily disconnect a small generator facility if an interconnection customer makes any change to the facility, other than a minor equipment modification, without the public utility's prior written authorization. The public utility may disconnect the small generator facility for the time necessary for the public utility to evaluate the affect of the change to the small generator facility on the public utility's transmission or distribution system.

(6) A public utility has the right to inspect an interconnection customer's small generator facility at reasonable hours and with reasonable prior written notice to the interconnection customer. If the public utility discovers that the small generator

**facility is not in compliance with the requirements of the small generator interconnection rules, then the public utility may require the interconnection customer to disconnect the small generator facility until compliance is achieved.**

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

**Stats. Implemented: ORS 756.040, 756.060**

**Hist.: NEW**

**860-082-0075**

**Arbitration of Disputes**

**(1) An interconnecting public utility or an interconnection applicant may petition the Commission for arbitration of disputes arising during review of an application to interconnect a small generator facility or during negotiation of an interconnection agreement. If the public utility or the applicant petitions the Commission to arbitrate their dispute, then the Commission uses an administrative law judge (ALJ) as arbitrator unless workload constraints necessitate the use of an outside arbitrator.**

**(2) A petition for arbitration of an interconnection agreement must contain:**

**(a) A statement of all unresolved issues;**

**(b) A description of each party's position on the unresolved issues; and**

**(c) A proposed agreement addressing all issues, including those on which the parties have reached agreement and those that are in dispute.**

**(3) A petition for arbitration of a dispute arising during review of an application to interconnect a small generator facility must contain:**

**(a) A statement of all unresolved issues;**

**(b) A description of each party's position on the unresolved issues; and**

**(c) A proposed resolution for each unresolved issue.**

**(4) Respondent may file a response within 25 calendar days of the petition for arbitration. In the response, the respondent must address each issue listed in the petition, describe the respondent's position on those issues, and present any additional issues for which the respondent seeks resolution.**

**(5) The filing of a petition for arbitration of a dispute arising during review of an application to interconnect a small generator facility does not affect the application's queue position.**

**(6) The arbitration is conducted in a manner similar to a contested case proceeding, and the arbitrator has the same authority to conduct the arbitration process as an ALJ has in conducting hearings under the Commission's rules, but the arbitration process is streamlined. The arbitrator holds an early conference to discuss processing of the case. The arbitrator establishes the schedule and decides whether an oral hearing would be helpful. After the oral hearing or other procedures (for example, rounds of comments), each party submits its final proposed agreement or resolution. The arbitrator chooses between the two final offers. If neither offer is consistent with applicable statutes, Commission rules, and Commission policies, the arbitrator makes a decision that meets those requirements.**

**(7) The arbitrator allows formal discovery procedures only to the extent deemed necessary. Parties are required to cooperate in good faith in voluntary, prompt, and informal exchanges of information relevant to the matter. Unresolved discovery disputes are resolved by the arbitrator upon request of a party. The arbitrator will order a party to provide information if the arbitrator determines the requesting party has a reasonable need for the requested information and that the request is not overly burdensome.**

**(8) Only the two negotiating parties have full party status. The arbitrator may confer with Staff for assistance throughout the arbitration process.**

**(9) To keep the process moving forward, appeals to the Commission are not allowed during the arbitration process. An arbitrator may certify a question to the Commission if the arbitrator believes it is necessary.**

**(10) To accommodate the need for flexibility, the arbitrator may use procedures that vary from those set out here if the arbitrator deems it helpful in a particular arbitration, as long as the procedures are fair, treat the parties equitably, and substantially comply with the procedures listed here.**

**(11) The Commission must accept or reject an arbitration decision within 30 calendar days.**

**(12) If the parties petitioned for arbitration of an interconnection agreement, then the petitioner must prepare an interconnection agreement complying with the terms of the arbitration decision and serve it on respondent within 14 calendar days after the Commission issues its arbitration decision. Respondent must either sign and file the agreement, or file objections to it, within 10 calendar days of service of it. If objections are filed, respondent must state how the agreement fails to comply with the arbitration decision and offer substitute language complying with the decision. The Commission must approve or reject a filed interconnection agreement within 20 calendar days of its filing or the agreement is deemed approved. If petitioner, without respondent's consent, fails to timely prepare and serve an interconnection agreement on respondent, respondent may file a motion requesting the Commission dismiss the petition for arbitration with prejudice. The Commission may grant such motion if the petitioner's failure to timely prepare and serve the interconnection agreement was the result of inexcusable neglect on the part of petitioner.**

**(13) The public utility and the applicant may agree to engage the services of an outside arbitrator rather than file a petition with the Commission.**

**Stat. Auth.: ORS Ch. 756**

**Stat. Implemented: ORS 756.040, 756.500**

**Hist.: NEW**

**860-082-0080**

**Complaints for Enforcement**

**(1) This rule specifies the procedure for a public utility, an interconnection customer, or an applicant to file a complaint for the enforcement of an interconnection agreement.**

**(2) A complaint for enforcement must contain the following:**

**(a) A statement of specific facts demonstrating that the complainant conferred with defendant in good faith to resolve the dispute, and that despite those efforts the parties failed to resolve the dispute;**

**(b) A copy of a written notice to the defendant indicating that the complainant intends to file a complaint for enforcement, as described in subsection (3)(a) below;**

**(c) A copy of the interconnection agreement or the portion of the agreement that the complainant contends that defendant violated or is violating. If a copy of the entire agreement is provided, complainant must specify the provisions at issue;**

**(d) A statement of the facts or a statement of the law demonstrating defendant's failure to comply with the interconnection agreement and complainant's entitlement to relief. The statement of entitlement to relief must indicate that the remedy sought is consistent with the dispute resolution provisions in the agreement, if any. Statements of facts must be supported by written testimony or one or more affidavits, made by persons competent to testify and having personal knowledge of the relevant facts. Statements of law must be supported by appropriate citations. If exhibits are attached to the affidavits, the affidavits must contain the foundation for the exhibits;**

**(e) The complaint may designate one additional person to receive copies of pleadings and documents;**

**(f) Complainant must also file with the complaint, as a separate document, any motions for affirmative relief. Motions for injunctive or temporary relief must be clearly marked. Nothing in this subsection precludes complainant from filing a motion subsequent to the filing of the complaint if the motion is based upon facts or circumstances unknown or unavailable to complainant at the time the complaint was filed; and**

**(g) Complainant must also file with the complaint, as a separate document, an executive summary outlining the issues and relief requested. Such summary must be no more than eight pages.**

**(3) The complaint for enforcement must be served as follows:**

**(a) At least 10 business days prior to filing a complaint for enforcement with the Commission, complainant must give written notice to defendant and the Commission that complainant intends to file a complaint for enforcement. The notice must identify the provisions in the interconnection agreement that complainant alleges were or are being violated, the specific acts or failure to act that caused or are causing the violation, and whether the complainant anticipates requesting temporary or injunctive relief. The notice must be served in the same manner as set forth in subsections (b) and (c) below, except that complainant must also serve the notice on all persons designated in the agreement to receive notices;**

**(b) Complainant must serve a copy of the complaint for enforcement on defendant the same day the complaint is filed with the Commission. Service may be by fax or overnight mail, provided the complaint arrives at defendant's location on the same day the complaint is filed with the Commission. Service by fax must be followed by a hard copy the next day in overnight mail; and**

**(c) Complainant must serve a copy of the complaint for enforcement on defendant's authorized representative, attorney of record, or designated agent for service of process.**

**(4) An answer must comply with the following:**

**(a) The answer must contain a statement of specific facts demonstrating that the defendant conferred with complainant in good faith to resolve the dispute and that despite those efforts the parties failed to resolve the dispute;**

**(b) The answer must respond to each allegation in the complaint and must set forth all affirmative defenses;**

**(c) The answer must contain a statement of the facts or a statement of the law supporting defendant's position. Statements of facts must be supported by written testimony or one or more affidavits, made by persons competent to testify and having personal knowledge of the relevant facts. Statements of law must be supported by appropriate citations. If exhibits are attached to the affidavits, the affidavits must contain the foundation for the exhibits;**

**(d) The answer may designate one additional person to receive copies of other pleadings and documents;**

**(e) Any allegations raised in the complaint and not addressed in the answer are deemed admitted; and**

**(f) Defendant must file with the answer, as a separate document, a response to any motion filed by complainant and any motion defendant wishes to file that seeks affirmative relief. Nothing in this subsection precludes defendant from filing a motion subsequent to the filing of the answer if the motion is based upon facts or circumstances unknown or unavailable to defendant at the time the answer was filed.**

**(5) The answer must be served as follows:**

**(a) Defendant must file a copy of the answer with the Commission within 10 business days after service of the complaint for enforcement;**

**(b) Defendant must deliver a copy of the answer to complainant the same day the answer is filed with the Commission, in the manner set forth in subsections (3)(b) and (3)(c) above;**

**(c) Defendant must serve a copy of the answer on the complainant's attorney, as listed in the complaint, or the person who signed the complaint, if complainant has no attorney.**

**(6) Complainant must file a reply to an answer that contains affirmative defenses within five business days after the answer is filed. The reply must be served in the manner set forth in subsections (3)(b) and (3)(c) above. If the reply contains new facts or legal issues not raised in the complaint, then the reply must also comply with subsection (2)(d) above.**

**(7) A cross-complaint or counterclaim must be answered within the 10-day time frame allowed for answers to complaints.**

**(8) The Commission conducts a conference regarding each complaint for enforcement of an interconnection agreement.**

**(a) The administrative law judge (ALJ) schedules a conference within five business days after the answer is filed, to be held as soon thereafter as is practicable. At the discretion of the ALJ, the conference may be conducted by telephone.**

**(b) Based on the complaint and the answer, all supporting documents filed by the parties, and the parties' oral statements at the conference, the ALJ determines whether the issues raised in the complaint can be determined on the pleadings and submissions without further proceedings or whether further proceedings are necessary. If further**

proceedings are necessary, the ALJ establishes a procedural schedule. Nothing in this subsection is intended to prohibit the bifurcation of issues where appropriate.

(c) In determining whether further proceedings are necessary, the ALJ must consider, at a minimum, the positions of the parties, the need to clarify evidence through the examination of witnesses, the complexity of the issues, the need for prompt resolution, and the completeness of the information presented.

(d) The ALJ may make oral rulings on the record during the conference on all matters relevant to the conduct of the proceeding.

(9) A party may file with the complaint or answer a request for discovery, stating the matters to be inquired into and their relationship to matters directly at issue.

(10) Expedited procedure. When warranted by the facts, the complainant or defendant may file a motion requesting that an expedited procedure be used. The moving party must file a proposed expedited procedural schedule along with its motion. The ALJ must schedule a conference to be held as soon after the motion is filed as is practicable, to determine whether an expedited schedule is warranted.

(a) The ALJ must consider whether the issues raised in the complaint or answer involve a risk of imminent, irrevocable harm to a party or to the public interest.

(b) If a determination is made that an expedited procedure is warranted, the ALJ must establish a procedure that ensures a prompt resolution of the merits of the dispute, consistent with due process and other relevant considerations. The ALJ must consider, but is not bound by, the moving party's proposed expedited procedural schedule.

(c) In general, the ALJ will not entertain a motion for expedited procedure where the dispute solely involves the payment of money.

Stat. Auth.: ORS Ch. 183 & 756

Stats. Implemented: ORS 756.040, 756.500

Hist.: NEW