Changes from the April 16, 2013 Draft of Chapter 480-108 WAC

WAC 480-108-010 Definitions.

~~**"Grid network distribution system"** means electrical service from a distribution system consisting of two or more primary circuits from one or more substations or transmission supply points that collectively feed secondary circuits serving more than one location and more than one electrical company customer.~~

~~**"In-service date"** means the date on which the generating facility and any related facilities are complete and ready for service, even if the generating facility is not placed in service on or by that date.~~

"Interconnection customer" means the person, corporation, partnership, government agency, or other entity that ~~-~~proposes to interconnect, or has executed an Interconnection Agreement with the electrical company ~~and that~~. The interconnection customer must: (a) own~~s~~ a generating facility interconnected to the electric system~~;~~, (b) ~~is~~ be a customer-generator of net-metered facilities, as defined in RCW 80.60.010(2)~~;~~, or (c) ~~is~~ otherwise ~~allowed~~ be authorized to interconnect by law. The interconnection customer is responsible for the generating facility, and may assign to another party responsibility for compliance with the requirements of this rule only with the express written permission of the electrical company. A net~~-~~-metered interconnection customer may lease a generating facility from, or purchase power from, a third-party owner of an on-site generating facility.

~~**"Model interconnection agreement"** means a written agreement including standard terms and conditions for the interconnection of generating facilities under this chapter. The model interconnection agreement may be modified to accommodate terms and conditions specific to individual interconnections, subject to the conditions set forth in these rules.~~

"Net metering," as defined in RCW 80.60.010, means measuring the difference between the electricity supplied by an electrical company and the electricity generated by a generating facility that is fed back to the electrical company over the applicable billing period.

"Network protectors" means devices installed on a ~~spot~~ network distribution system designed to detect and interrupt reverse current-flow (flow out of the network) as quickly as possible, typically within three to six cycles.

"Point of common coupling" ~~or **"PCC"**~~ means the point where the generating facility's local electric power system connects to the electric system, such as the electric power revenue meter or at the location of the equipment designated to interrupt, separate or disconnect the connection between the generating facility and electrical company. The point of common coupling is the point of measurement for the application of Institute of Electrical and Electronics Engineers standard (IEEE) 1547.

~~**"PURPA qualifying facility"** means a generating facility that meets the criteria specified by the Federal Energy Regulatory Commission (FERC) in 18 C.F.R. Part 292 Subpart B and that sells power to an electrical company under chapter 480-107 WAC.~~

~~**"Spot network distribution system"** means electrical service from a distribution system consisting of two or more primary circuits from one or more substations or transmission supply points arranged such that they collectively feed a secondary circuit serving a single location (e.g., a large facility or campus) containing one or more electrical company customers.~~

Comment [A1]: Tacoma Power suggests a minor modification to the definition of "network protectors" and deleting the unused definitions of "spot network distribution system" and "grid network distribution system."

Response: The proposed changes are included. The Commission will also delete the unused definitions of "in-service date," "model interconnection agreement," and "PURPA qualifying facility" as these terms are not used in the chapter.

Comment [A2]: Comment from PSE: Add "or" in between subsection (a) and subsection (b) of the definition of interconnection customer.

Response: To add clarity, this sentence is broken into two and subsection (c) is modified to be grammatically correct. The list is separated by "or" in between (b) and (c), thus adding another "or" in between (a) and (b) is unnecessary.

Comment [A3]: Tacoma Power's minor edit.

Comment [A4]: The abbreviation PCC is not used in the rule.

WAC 480-108-020 Eligibility and technical requirements for tier 1, tier 2, and tier 3 interconnection.

(1) Applicability.

(a) Tier 1. Interconnection of a generating facility will use Tier 1 processes and technical requirements if the proposed generating facility meets all of the following criteria:

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(2) Technical Requirements.

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(b) Tier 2.

(i) In all cases, the interconnection facilities must isolate the generating facility from the electric system as specified by IEEE 1547, and the interconnection agreement. The interconnection customer shall prevent its generating facility equipment from automatically reenergizing the electric system as specified by IEEE 1547, and the interconnection agreement. For inverter-based systems, the interconnecting facility must comply with IEEE 1547, UL 1741 and the interconnection agreement set forth by the electric utility. For noninverter based systems a separate protection package will be required to meet IEEE 1547 and the interconnection agreement set forth by the electric utility.

(ii) If the generating facility fails to meet the characteristics for Tier 2 applicability, but the electrical company determines that the generating 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 electrical company may offer the interconnection customer a good-faith, nonbinding estimate of the costs of such proposed minor modifications. If the interconnection customer authorizes the electrical company to proceed with the minor modifications and agrees to pay the entire cost of the modifications, then the electrical company may approve the application using Tier 2 processes and technical requirements.

(iii) For proposed generating facilities 50 kW and greater, three-phase connection may be required by the electric company.

(iv) For three-phase induction generator interconnections, the electrical company may, in its sole discretion, specify that ground fault protection must be provided. Use of ground overvoltage or ground overcurrent elements may be specified, depending on whether the electrical company uses three-wire or effectively grounded four-wire systems.

(v) If the generating facility is single-phase and interconnected on a center tap neutral of a 240 volt service, it must not create an imbalance between the two sides of the 240 volt service of more than 5 kW.

(vi) If the generating facility is proposed for interconnection at primary (greater than 600 V class) distribution voltages, the connection of the transformer(s) used to connect the generating facility to the electric system must be the electrical company's standard connection. This is intended to limit the potential for creating overvoltages on the electric system for a loss of ground during the operating time of functions designed to prevent islanding.

(vii) For primary-voltage connections to three-phase, three-wire systems, the transformer primary windings must be connected phase to phase.

(viii) For primary-voltage connections to three-phase, four-wire systems, the transformer primary windings may be connected phase to neutral.

(ix) **Disconnect switch**.

(A) Except as provided in subsections B, C, and D of this subsection, the generating facility must include a visible, lockable AC disconnect switch. The electrical company shall

Comment [A5]: The word "criteria" is in the Tier 2 section of this rule, but was inadvertently left out of Tier 1.

Comment [A6]: The Commission inadvertently removed any reference to a Tier 2 disconnect switch in the April 17, 2013, proposed rules. The provision in WAC 480-108-BBB(2)(b)(ix) from the February 5, 2013, draft will be restored in the proposed rules, but modified to not require a specific placement of the switch. A utility may specify the placement of the switch in its tariff.

have the right to disconnect the generating facility at a UL listed disconnect switch to meet electrical company operating safety requirements.

(B) An electrical company may waive the visible, lockable disconnect switch requirement for an inverter-based system.

(C) To maintain electrical company operating and personnel safety in the absence of an external disconnect switch, the interconnection customer shall agree that the electrical company has the right to disconnect electric service through other means if the generating facility must be physically disconnected for any reason, without liability to the electrical company. These actions to disconnect the generating facility (due to an emergency or maintenance or other condition on the electric system) will result in loss of electrical service to the customer's facility or residence for the duration of time that work is actively in progress. The duration of outage may be longer than it would otherwise have been with an AC disconnect switch.

(D) In the absence of an external disconnect switch, the interconnection customer is required to operate and maintain the inverter in accordance with the manufacturer's guidelines, and retain documentation of commissioning. In the absence of such documentation the electric company may, with 5 days' notice and at the interconnection customer's expense, test or cause to be tested the inverter to ensure its continued operation and protection capability. The person that tests the inverter shall provide documentation of the results to both the electrical company and the interconnection customer. Should the inverter fail the test, the electric company may disconnect the generating facility, and require the interconnection customer to repair or replace the inverter. The cost of any such repair or replacement required by the electric company shall be the sole responsibility of the interconnection customer.

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WAC 480-108-030 Application for interconnection.

(8) Tier 1 applications.

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(iv) Initial operation~~Operation~~. An interconnection customer must interconnect and operate the generating facility within one year from the date of approval of the application, or the application expires, unless the electrical company, in its sole discretion, grants an extension in writing.

Comment [A7]: Initial operation is a defined term that was not used in the rule. Editing the caption of these subsections uses the defined term.

(9) Tier 2 application timeline.

(a) Notice of receipt. Notice of receipt of an application and application fee shall be sent by the electrical company to the interconnection customer within five business days.

(b) Notice of complete application.

(i) The electrical company shall notify the interconnection customer if the application is complete or incomplete, and if incomplete specifying any deficiencies, within ~~twenty~~ten business days after notice of receipt of application.

Comment [A8]: The wrong number of days for the notice of complete application in Tier 2 was inadvertently included in the proposed rules.

As requested by the utilities, timelines are standardized when possible. For all tiers, utilities shall send a notice of complete or incomplete application within 10 business days after a notice of receipt of application is sent.

(ii) When an electrical company sends a notice of an incomplete application to an interconnection customer, the interconnection customer shall provide a complete application to the electrical company within fifteen business days of the notice. The electrical company may, but is not required to, grant an extension in writing. If the interconnection customer fails to complete the application, the application expires at the end of the incomplete application period.

(c) Approval or denial. Within thirty business days after a complete application notice is sent to an interconnection customer, the electrical company shall approve, approve with conditions, or deny the application with written justification. If delays result due to unforeseen circumstances, customer variance requests, or incentive program approval requirements, the interconnection customer shall be promptly notified.

(d) Offer of agreement. The electrical company must offer the interconnection customer an executable interconnection agreement within five business days of the notification of approval described in (c) of this subsection.

(e) Initial operation~~Operation~~. An interconnection customer must interconnect and operate the generating facility within one year from the date of approval of the application, or the application expires, unless the electrical company, in its sole discretion, grants an extension in writing.

(10) Tier 3 application timeline.

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(e) An interconnection customer must execute an interconnection agreement, and simultaneously pay any deposit required by the electrical company not to exceed fifty percent of the estimated costs to complete the interconnection, within thirty business days from the date of approval of the final application. At the electrical company's discretion, an extension may be granted in writing. If the electrical company must upgrade or construct new electric system facilities, the interconnection customer must meet the credit requirements of the electric company prior to the start of construction.

(f) **Initial operation.** An interconnection customer must begin operation of the generating facility within two years of the effective date of the Interconnection Agreement, or both the application and subsequent Interconnection Agreement expire. At the electrical company's discretion, an extension may be granted in writing.

WAC 480-108-040 General terms and conditions of interconnection.

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(16) Chapter 80.60 RCW limits the total capacity of generation for net metering. However, the electrical company may restrict or prohibit new or expanded net metered systems on any feeder, circuit or network if ~~the restriction is supported by~~ engineering, safety, or reliability studies establish the need for a restriction or prohibition.

WAC 480-108-080 Interconnection service tariffs.

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(5) **Tier 3 alternative interconnection service tariff.** If an electrical company demonstrates that the small generator interconnection provisions will impair service adequacy, reliability or safety or will otherwise be incompatible with its electric system, the electrical company may file a Tier 3 alternative interconnection service tariff. An alternative interconnection service tariff must meet the following requirements~~:~~ and be consistent with all provisions of this chapter.

Comment [A9]: See comment 7, above. Subsection (e) is broken into two subsections and the caption/title "initial operation" is added to the second section. This sentence is added to the new section (e) to ensure that the time limits in the new subsection (e) and the new subsection (f) may be waived by the utility.

Comment [A10]: WAC 480-108-040(11) currently reads: "The electrical company also may restrict or prohibit new or expanded interconnected generation capacity on any feeder, circuit or network if engineering, safety or reliability ***studies establish a need for*** restriction or prohibition" (emphasis added).

In the proposed rule, Staff inadvertently changed the language to allow restrictions "supported by" engineering, safety or reliability studies.

The Commission retains the intent of the current rule by reverting to the original language that requires studies to "establish" a need for restriction or prohibition.

Comment [A11]: Minor edit to ensure that the provisions of the Tier 3 tariff are consistent with the entire chapter, not just the list in this subsection.