

- 5 The Commission includes a discussion of those matters in its rule adoption Order. To avoid unnecessary duplication, the Commission designates the discussion in this Order as its concise explanatory statement, supplemented where not inconsistent by the Staff memoranda, which are available on the Commission's web pages at <http://www.utc.wa.gov/060649>. Together, the documents provide a complete and concise explanation of the agency's actions and its reasons for taking those actions.
- 6 The rules establish standards for interconnection of consumer-owned power generation facilities up to 20 megawatts (MW) capacity to the delivery systems of electric utilities subject to Commission jurisdiction. These regulations include standards for applications for interconnection, processing of such applications, technical and engineering standards for interconnections, safety standards, insurance and liability provisions, and other provisions.
- 7 The Commission is adopting this rule to advance state policy to encourage generally the use of distributed generation and particularly renewable energy technologies.¹ In addition to this general state policy, the Commission's rulemaking inquiry considered the following as pertinent policy context:
- The requirement in RCW 82.16.120 that uniform state-wide interconnection standards be in place before certain tax credits for small-scale renewable projects are available.
 - Amendments to RCW 80.60 enacted in 2006 to increase the generator capacity ceiling for net metering from 25 kW to 100 kW.²
 - The requirement under the 2005 federal Energy Policy Act that state utility regulatory agencies consider adoption by August 8, 2008, of interconnection standards pursuant to the Public Utility Regulatory Policies Act (PURPA).³
 - The Federal Energy Regulatory Commission's (FERC) adoption of a rule governing interconnection of small generators to delivery facilities over which it holds jurisdiction.⁴

¹ RCW 80.28.025 establishes a state policy to encourage electric power resources from renewable sources through use of incentives.

² Chapter 201, Laws of 2006.

³ 2005 Energy Policy Act §1254(a) codified at 16 U.S.C §2621(d)(15).

⁴ Standardization of Small Generator Interconnection Agreements and Procedures, Order No. 2006, 70 FR 34100 (June 13, 2005), FERC Stats. & Regs. ¶ 31,180 (2005) (Order No. 2006), order on reh'g, Order No.

- 8 Section 1 of Substitute Senate Bill (SSB) 5101, Chapter 300, Laws of 2005, states that “the legislature intends to provide incentives for the greater use of locally created renewable energy technologies.” SSB 5101 also provides that utilities, in return for a credit against the public utility excise tax, may supply an incentive payment to consumers for consumer-generated electricity from renewable energy systems. However, the incentive payments created by Section 3 of SSB 5101, now codified at RCW 82.16.120(2), are only available to customers connected to the distribution system of a light and power business if “uniform standards for interconnection to the electric distribution system” are in effect for utilities serving eighty percent of total customer load in the state. The Commission’s rule adoption will encourage small-scale, customer-owned distributed generation facilities by establishing uniformity among the investor-owned utilities regarding technical and process standards for interconnection of such facilities to certain utility delivery systems.
- 9 RCW 80.60 was amended in 2006 to increase the maximum capacity for customer-owned generation qualifying for net metering from 25 kW to 100 kW. WAC 480-108 establishes the interconnection requirements that apply to customer-owned, net-metered generation. Adopting this rule addresses the change in RCW 80.60 by increasing the capacity of consumer-owned generation covered under WAC 480-108.
- 10 The federal Energy Policy Act of 2005 included amendments to Section 111(d) of PURPA (16 U.S.C. 2621(d)) that require the Commission to consider and determine by August 8, 2008, whether to establish standards for interconnection. The Commission’s inquiry and adoption of this rule complies with this requirement.
- 11 The FERC has adopted requirements for utility interconnection of generation facilities up to 20 MW when those facilities are to be interconnected to delivery facilities that fall within its jurisdiction. The Commission is adopting rules governing interconnection of generation facilities up to 20 MW when those facilities are to be interconnected to delivery facilities within its jurisdiction and outside of FERC’s jurisdiction. For generation facilities with generating capacity greater than 300 kW,

2006-A, 70 FR 71760 (Nov. 30, 2005), FERC Stats. & Regs. ¶ 31,196 (2005), order on clarif’n, Order No. 2006-B, 71 FR 42587 (July 27, 2006), FERC Stats. & Regs. ¶ 61,046 (2006).

the Commission's rules refer to the FERC requirements in order to both "fill the gap" and maintain consistency of standards for larger generation facilities.

12 **REFERENCE TO AFFECTED RULES:** This Order amends certain sections and adds new sections to Washington Administrative Code, WAC 480-108, Electric Companies – Interconnection with Electric Generators.

13 This Order amends and adopts the following sections of Washington Administrative Code:

Amend	WAC 480-108-001	Purpose and scope.
Amend	WAC 480-108-005	Application of rules.
Amend	WAC 480-108-010	Definitions.

Part 1: Interconnection of Generation Facilities with Nameplate Capacity
Rating of 300 KW or Less.

Adopt	WAC 480-108-015	Scope of Part 1.
Amend	WAC 480-108-020	Technical standards for interconnection.
Amend	WAC 480-108-030	Application for interconnection.
Adopt	WAC 480-108-035	Model interconnection agreement, review and acceptance of interconnection agreements and costs.
Amend	WAC 480-108-040	General terms and conditions of interconnection.
Amend	WAC 480-108-050	Certificate of completion.
Adopt	WAC 480-108-055	Dispute Resolution.
Amend	WAC 480-108-060	Required filings—Exceptions.
Adopt	WAC 480-108-065	Cumulative effects of interconnections with a nameplate capacity rating of 300 kW or less.

Part 2: Interconnection of Generation Facilities with Nameplate Capacity
Rating Greater than 300 KW but no more than 20 MW.

Adopt	WAC 480-108-070	Scope of Part 2.
Adopt	WAC 480-108-080	Interconnection service tariffs.
Adopt	WAC 480-108-090	Alternative interconnection service tariff.

Adopt	WAC 480-108-100	Dispute resolution.
Adopt	WAC 480-108-110	Required filings – Exceptions.
Adopt	WAC 480-108-120	Cumulative effects of interconnections with a nameplate capacity rating greater than 300 kW but no more than 20 MW.
Amend	WAC 480-108-999	Adoption by reference.

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PREPROPOSAL STATEMENT OF INQUIRY AND ACTIONS

THEREUNDER: The Commission filed a Preproposal Statement of Inquiry (CR-101) on June 7, 2006, at WSR 06-12-104. The statement advised interested persons that the Commission intended to examine whether new or modified regulations are needed to govern aspects of investor-owned electric utility operations for which new federal standards are included in the Energy Policy Act of 2005. These new federal standards address: 1) net-metering, 2) fuel sources, 3) fossil fuel generation efficiency, 4) smart metering, and 5) interconnection. With regard to interconnection, the statement advised that the Commission's inquiry could lead to proposed amendments to WAC 480-108.

15

ADDITIONAL NOTICE AND ACTIVITY PURSUANT TO PREPROPOSAL

STATEMENT: The Commission informed persons of its inquiry into this matter by providing notice of the subject and the CR-101 to all persons on the Commission's list of persons requesting such information pursuant to RCW 34.05.320(3), the Commission's lists of all registered electric and gas companies, persons on the list of persons that received notices in the Commission's previous interconnection rulemaking in Docket UE-051106, persons interested in electric and gas issues, as well as to attorneys representing these companies. The Commission posted the relevant rulemaking information on its Internet web site at <http://www.utc.wa.gov/060649>. In its notice, the Commission posed four questions regarding electrical interconnection and invited interested persons to respond and make proposals in writing by August 11, 2006. The four questions were:

- 1) Should WAC 480-108 be amended to include customer-owned facilities up to 100 kW? If so, would the increase to facility size necessitate any other changes to the rule?

- 2) Is there another “break-point” to which it would be appropriate for practical reasons to increase the scope of WAC 480-108 (e.g., 300 kW, 500 kW)? If so, would the increase in facility size necessitate any other changes to the rule?
- 3) Should interconnection of facilities larger than those covered currently by WAC 480-108 be governed by a standard rule? If so, would the Federal Energy Regulatory Commission’s (FERC) Small Generator Interconnection Rule serve as a good model?⁵ If so, how should the FERC rule be adapted to Washington circumstances?
- 4) If interconnection of facilities larger than those covered currently under WAC 480-108 should not be governed by a standard rule, what principles should apply to such interconnections?

The Commission also welcomed any comprehensive recommendations or proposals that stakeholders or utilities might propose for state-wide standards for interconnection.

- 16 Pursuant to the notice, the Commission received written comments from the following companies, organizations, and interested persons: Industrial Customers of Northwest Utilities (ICNU), Puget Sound Energy (PSE), the Washington Load-Serving Utilities (Utilities)⁶, Avista Utilities, Vote Solar Initiative, PacifiCorp and the U.S. Environmental Protection Agency (U.S. EPA).
- 17 The Utilities proposed a set of standards that they jointly developed and recommended as a framework for establishing interconnection standards for facilities up to nameplate capacity of 300 kW to be used by both Commission-jurisdictional utilities and public utilities that are not jurisdictional to the Commission.⁷ The Utilities also stated that, given the complexity of interconnecting generation in excess

⁵ Standardization of Small Generator Interconnection Agreements and Procedures, Order No. 2006, 70 FR 34100 (June 13, 2005), FERC Stats. & Regs. ¶ 31,180 (2005) (Order No. 2006), order on reh'g, Order No. 2006-A, 70 FR 71760 (Nov. 30, 2005), FERC Stats. & Regs. ¶ 31,196 (2005), order on clarif'n, Order No. 2006-B, 71 FR 42587 (July 27, 2006), FERC Stats. & Regs. ¶ 61,046 (2006).

⁶ The Load-Serving Utilities is a group consisting of Puget Sound Energy, Avista Corporation, Benton REA, Big Bend Rural Electric Cooperative, Chelan County PUD, City of Port Angeles, Clark Public Utilities, Elmhurst Mutual, Grant County PUD, Kittitas County PUD, Lewis County PUD, Seattle City Light, Snohomish County PUD, Tacoma Power, the Washington PUD Association, Western Rural Electric Cooperative Association, and the Association of Washington Cities.

⁷ The Commission commends the investor-owned and public utilities for working cooperatively to develop a proposed set of uniform interconnection standards. We particularly appreciate the constructive participation in our inquiry and rulemaking process of the public utilities that are not within our jurisdiction.

of 300 kW to utility distribution systems, each utility should develop standards that take into account each utility's unique circumstances. The groups' interconnection standards include a set of principles they contend should govern each utility's standards for facilities greater than 300 kW. According to the joint comments, these interconnection standards are intended to insure the safe and reliable operation of the distribution system.

18 The Commission convened a workshop on December 15, 2006, to discuss interconnection issues and the Utilities' proposal and eight related questions:

- 1) What criteria should be used to distinguish customers eligible to apply for interconnection to a utility's distribution system from customers eligible to apply for interconnection to the utility's transmission system under FERC rules?
- 2) Should standards governing distribution-level interconnections be limited in application to net-metered facilities and if so, why?
- 3) Should standards governing distribution-level interconnections apply to interconnection of qualifying facilities (QF) under the PURPA and if not, why not?
- 4) Do the engineering requirements and limitations relevant to distribution-level interconnections up to 300 kW vary among utility distribution systems? If so, what characteristics of the distribution system cause the engineering requirements and limitations to vary? How might this be addressed via rule?
- 5) Do the engineering requirements and limitations relevant to distribution-level interconnections up to 2 MW vary among utility distribution systems? If so, what characteristics of the distribution system cause the engineering requirements and limitations to vary? How might this be addressed via rule?
- 6) Should the requirement of an external disconnect switch contained in WAC 480-108 be retained?
- 7) Should utilities be allowed the option to require an interconnecting customer to bear the cost of a dedicated distribution transformer if one is deemed necessary by the utility?

8) Given the Commission's general authority to address disputes (WAC 480-107) what, if any, additional dispute resolution processes are needed to apply specifically to generator interconnection?

- 19 The Cogen Coalition, Clark County PUD, Grant County PUD, International Brotherhood of Electrical Workers (IBEW) and Department of Community Trade and Economic Development attended the workshop in person and another seven persons attended by phone due to inclement weather. Persons participating on the phone included representatives of: Tacoma Power, PacifiCorp, Benton County REA, ICNU, Avista Corp., U.S. EPA, and Inland Power and Light. PSE, Benton REA and Mr. Parker Holden submitted written responses to the workshop questions.
- 20 Drawing on the initial written comments received and the workshop discussion and written responses to the workshop questions, the Commission circulated on January 25, 2007, a first draft rule for discussion and comment. The Commission received detailed written comments and suggestions on the discussion draft on February 28, 2007, from: Avista and PSE commenting jointly, PacifiCorp, Northwest Combined Heat and Power (NWCHP) Center, United States Combined Heat & Power Association (USCHP), Allied Electric, LLC. (Allied), ICNU, U.S. EPA, and IBEW Local Union 77.
- 21 Most comments on the first draft focused on procedural aspects of interconnection service with technical aspects of the rule's requirements drawing very little comment. In particular, persons representing the interests of potential combined heat and power and other interconnection customers raised a number of concerns regarding the application and review process, as well as cost assignment and dispute resolution. These interests advocated for better balance in the relationship between interconnection customers and utilities. The utilities sought more clarity in the requirements as well as specific language to prohibit "back-feeding" in distribution networks and authority to require remotely accessible metering.
- 22 Considering the comments and recommendations made on the first draft, the Commission circulated on April, 30, 2007, a second draft rule for discussion and comment. On May 25, 2007, the Commission received written comments and

suggestions from: Avista and PSE filing jointly, PacifiCorp, NWCHP Center, USCHP, Allied, and ICNU.

- 23 Detailed comments on the second discussion draft focused principally on further refinements and clarifications to the application, study and review, and cost assignment processes. Potential interconnection customers advocated that the costs of interconnection should be shared between the utility and the interconnection customer, if other customers on the utility's system benefit from the interconnection. In the alternative, the interconnection customers sought protection against excessive interconnection fees through the requirement that charges be cost-based and follow generally accepted engineering practice. In addition, the interconnection customers recommended that certain rule language be made more specific and that dispute resolution should include cost-assignment. Utilities sought clarification of how the rule would apply to net metering and certain distribution grid networks.
- 24 **NOTICE OF PROPOSED RULEMAKING:** After considering and addressing the comments and recommendations received on the second discussion draft, the Commission filed a Notice of Proposed Rulemaking (CR-102) on July 5, 2007, at WSR# 07-14-150, scheduling the matter for oral comment and adoption at 1:30 p.m., Wednesday, August 15, 2007, in the Commission's Hearing Room, Second Floor, Richard Hemstad Building, 1300 S. Evergreen Park Drive S.W., Olympia, Washington. The notice provided interested persons the opportunity to submit written comments to the Commission by August 2, 2007.
- 25 **COMMENTERS (WRITTEN COMMENTS):** The Commission received written comments from ICNU and the Public Counsel Section of the Washington Office of the Attorney General (Public Counsel) both supporting adoption of the rule as proposed. PacifiCorp filed written comments generally supporting adoption of the rule as proposed while advocating clarification of three aspects of the proposed rule. Avista filed written comments prior to the hearing supporting the rule as proposed and agreeing with PacifiCorp's requested clarifications. No other parties submitted formal written comments by August 2, 2007, in response to the CR-102 proposed rules.

- 26 **RULEMAKING HEARING:** The Commission considered the rule proposal for adoption, pursuant to the notice in WSR # 07-14-150, at a rulemaking hearing before Chairman Mark H. Sidran, Commissioner Patrick J. Oshie, and Commissioner Philip B. Jones. Mr. Les Bahls of PacifiCorp testified in support of the proposed rule. Mr. David Van Holde, representing King County, and Mr. Chuck Collins, representing Allied, testified expressing concerns with several aspects of the proposed rules. Chairman Sidran offered any person at the hearing an opportunity to submit further written comments by August 22, 2007.
- 27 The Commission received additional written comments by August 22, 2007, from Allied and the Northwest Energy Coalition (NVEC). In addition, the Commission received letters from Representative Jeff Morris and Representative Zack Hudgins expressing concerns regarding the effect of proposed WAC 480-108-020(2)(e) on consumer opportunity to participate in net metering programs and on uniformity among interconnection standards.
- 28 **COMMISSION DISCUSSION AND RESPONSE TO COMMENTS:** WAC 480-108 requires electric utilities under Commission jurisdiction to offer customers a new interconnection service that the utilities would not otherwise be required, or authorized, to offer. Our task is to establish rules governing this new service that advance Washington State's policies encouraging net-metering and uniformity in standards addressing interconnection of customer-owned generation, while at the same time fulfilling our longstanding statutory obligation to ensure safe and reliable electric utility service for all customers at prices that are just and reasonable. With that task in mind, we turn to the comments and recommendations received regarding the proposed rules.
- 29 Application of the Proposed Rules to PURPA Qualifying Facilities: PacifiCorp and Avista ask us to clarify that proposed WAC 480-108-001(4) does not govern the interconnection of PURPA qualifying facilities. The rule as proposed states "This chapter does not govern electric company services to PURPA qualifying facilities pursuant to WAC 480-107." The intent of the rule was to state that all services to qualifying facilities addressed by WAC 480-107, including interconnection, are governed by that chapter and not by WAC 480-108. We have clarified the proposed rule text as requested.

- 30 Metering for Net-Metered Systems: PacifiCorp and Avista ask us to clarify that proposed WAC 480-108-040(7)(a) applies only to net metered systems that qualify under RCW 80.60. WAC 480-108-040(7)(a) is qualified by the language “as set forth in chapter 80.60 RCW.” Thus, it is clear that the proposed rule encompasses only systems qualifying under RCW 80.60. We do not find that the text of the proposed rule requires modification to clarify this intent.
- 31 Study of Cumulative Effects of Interconnection: PacifiCorp and Avista ask us to clarify that the requirements set out in proposed WAC 480-108-065 and WAC 480-108-120, may be fulfilled jointly with a distribution system planning study that includes interconnections of all capacity levels. The two proposed rules require, respectively, record-keeping and study of the effects of interconnections from zero to 300 kW of nameplate capacity and the same for interconnections greater than 300 kW up to 20 MW of nameplate capacity. Although there are separate rules governing interconnection up to 300 kW and those greater than 300 kW, the rule language does not require separate studies. In appropriate circumstances, a single study may be used to meet the requirements of both rules so long as records are sufficiently detailed to identify the number, date of interconnection, and cumulative nameplate capacity within each of these two generation categories.
- 32 Codes and Standards: At WAC 480-108-020(1)(f)(i) the proposed rule deleted the standards of the Institute of Electrical and Electronics Engineers (IEEE) from the list of codes and standards with which electric company interconnections must comply. In addition this section adds a utility’s “written electricity service requirement” to the list of such codes and standards.
- 33 King County, Allied Electric, and NVEC recommend that IEEE should be included in the list of codes and standards. They contend that IEEE publishes the most important standard regarding interconnection of distributed electrical generation -- IEEE Standard 1547 – which, Allied points out, is referenced elsewhere in WAC 480-108-020.
- 34 We agree with the commenters that IEEE standards are important to interconnection of customer generation to utility electric systems. IEEE’s Standard 1547 is referenced throughout the proposed rules where it specifically applies and IEEE Standard 1547 is adopted by reference in WAC 480-108-999(3). Deletion of IEEE

from WAC 480-108-020(1)(f)(i) appears to have been a drafting error. The text of the proposed rule, as adopted here, includes IEEE standards in the list of codes and standards with which the electric company interconnections must comply.

- 35 King County expresses a concern that the codes and standards listed in WAC 480-108-020(1)(f)(i) include those of the Western Electricity Coordinating Council (WECC) and National Electricity Reliability Corporation (NERC). The county contends that these requirements are regional as opposed to national or international in scope and may represent regional issues or interests that do not serve the goal of promoting an industry-wide consistency that will assist equipment manufacturers to meet technical requirements.
- 36 Utilities must comply under federal law with reliability criteria established by the WECC and NERC as overseen by the FERC. The codes and standards of these entities are necessary and appropriate to include in WAC 480-108-020(1)(f)(i).
- 37 Allied, King County and NREC recommend that compliance with “the electric company’s written electric service requirement, if any” should be deleted from WAC 480-108-020(1)(f)(i). They argue that a utility’s service requirements could contain unique or utility-specific provisions that might override the interconnection requirements and allow a utility to avoid offering a standardized service. This result, they argue, is inimical to the objective of uniformity in the standards governing interconnection.
- 38 The intent of the proposed rule is to require that electric company interconnections comply with the general provisions and requirements included in the electric company’s tariff, usually in a section entitled “general rules and regulations” or similar. These rules and requirements are approved by the Commission and include many aspects of service not specifically addressed by proposed WAC 480-108. Examples include such topics as restoration of service, credit terms and meter testing. Where electric company services are provided under a specific tariff pursuant to Commission rules, as will be the case for interconnection of customer-owned generation, the terms and conditions of the tariff shall control in the event of any conflict with general rules and regulations.

39 To avoid any ambiguity, we have addressed the concern raised by the commenters by clarifying the rule text to make clear that the written service requirements referenced in this section are those approved by the Commission.

40 Prohibition on Reverse Current Flow Through Network Protectors: Proposed WAC 480-108-020(2)(e) states:

(e) The electrical company must verify on the basis of evidence provided by the interconnection customer that the generating facility will never cause reverse current flow through the electrical company's network protectors.

41 King County comments that this provision applies only to secondary network distribution systems. King County observes that the provision may cause some confusion because it appears in the rule without a “header” or some other introduction to make clear that it only applies to these circumstances.

42 Allied comments that this provision is “prohibitive” because it does not reflect cases where a utility has approved a grid or spot network interconnection. Allied recommends qualifying the provision with the clause “unless approved by the electrical company through Net Metering or some other Commission-approved power exchange contract.”

43 Representative Jeff Morris expresses a concern that this provision will prohibit net metering customer-generators from exporting electrical power generated by a net metering system connected to the grid. He requests that the proposed language be modified to ensure that the opportunity to net meter for small and mid-size distributed generation in Washington is not compromised.

44 Representative Zack Hudgins expresses a concern that this provision will prohibit net metering customer-generators from exporting electrical power generated by a net metering system connected to the grid. Representative Hudgins expresses the opinion that this language would undermine any net metering in our state and undermine the legislation creating net metering because net metering “must reverse current flow from a small generator into the grid.” He acknowledges that the language may be prompted by safety concerns and recommends that the provision be clarified.

- 45 The prohibition on reverse current flow through network protectors is not a newly proposed rule, it exists in current WAC 480-108-020(2)(e). The application of the rule is limited to distribution system configurations that include network protectors, so called “network distribution systems.” These systems present unique engineering and operational challenges in terms of safety and reliability, and are few in number.
- 46 Network distribution systems are electrical system designs used by distribution utilities to serve dense, usually urban, load centers with enhanced reliability. The systems accomplish enhanced reliability by serving network elements (*i.e.*, segments of customer load) from multiple primary circuits (*i.e.*, distribution substations). Service reliability is enhanced because in the event of an outage on one primary circuit, the network element can continue to be served by a second, or even a third, primary feeder. This design depends on the principle that the network element can be isolated from any of its multiple primary feeders in the event of a fault on that feeder in order to ensure that one primary fault is not fed by, and does not produce cascading faults on, the other primary feeders. The job of isolating the network elements is performed by the “network protectors.” These are essentially one-way circuit breakers that open in the event of a primary circuit fault to prevent reverse current flow into the faulted feeder circuit.⁸
- 47 It is well recognized by engineering and standard-setting bodies that network distribution systems present special problems and warrant special protections to ensure that interconnections do not present hazards to safety or reliability. But while they warrant special treatment, it is also true that such networks constitute a very limited proportion of utility service territories. One example is Seattle City Light’s service in downtown Seattle. Use of such networks on the investor-owned utility systems is rare. PSE has only one example of network service: Southcenter Mall in Tukwila is served with a spot distribution network. PacifiCorp has no customers in Washington served by a distribution network. Avista has approximately 20 spot distribution networks serving large office buildings and shopping centers in downtown Spokane. These networks serve only about three percent of Avista’s load.⁹

⁸ Staff Memorandum in Docket UE-060649 re: Network Distribution Systems, September 5, 2007.

⁹ *Id.*

48 King County's comment indicates that the proposed rule does not make clear that this provision is limited to network distribution systems. These systems require special treatment to ensure safety and reliability, but such protections will not adversely affect the broad opportunities for net metering and interconnection of customer-owned generation because the systems are rare and represent a very small proportion of electric company service territories.

49 To avoid any confusion or ambiguity as to the necessity and application of WAC 480-108-020(2)(e) we have clarified the text of the rule as follows to make clear that it applies only to network distribution systems and is intended only to protect safety and reliability:

The electrical company must verify on the basis of evidence provided by the interconnection customer that a generating facility interconnected to a grid network distribution system or a spot network distribution system will not impair public safety or quality of service to the electrical company's other customers as a result of reverse current flow through the electrical company's network protectors.

50 Metering. Proposed rule WAC 480-108-040(7)(b) states:

(b) Production metering: The electrical company may require separate metering, including metering capable of being remotely accessed, for production. This meter will record all generation produced and may be billed separately from any net metering or customer usage metering. Costs associated with production metering will be paid by the interconnection customer.

51 King County comments that by allowing the utility to require "remotely accessed" meters the proposed rule could make small-scale renewable projects prohibitively expensive.

52 Allied recommends that the utility should not be allowed to require remotely accessible metering and that all metering costs should be the responsibility of the utility and not the interconnection customer. Allied contends that requiring interconnection customers to pay for production metering is "discriminatory" because other customers are not required to install such metering.

- 53 NWECC comments that more clarity is necessary regarding the “meter parameters” a utility may require so that future conflicts and uncertainty are avoided. The NWECC recommends that the provision allowing the utility to require production metering should be eliminated because it could increase costs and is unnecessary.
- 54 Requiring interconnection customers to bear the cost of production meters is not unusual. In fact, a clear majority of states that have adopted interconnection rules, and the FERC, require that the cost of production metering be borne by interconnection customers.¹⁰ This is also the case in existing WAC 480-108-040(7)(b). Many of the standards in other states allow the utility to require remotely accessible meters, subject to some constraints and utility proof that the added capability is necessary.
- 55 Allied’s contention that requiring interconnection customers to pay for production metering when other customers are not required to pay for meters is unavailing. Unlawful discrimination may exist when “similarly situated” customers are treated differently. But, interconnection customers are not similarly situated to ordinary retail customers whose meter costs are borne by the utility because interconnection customers impose different costs and different service requirements on the utility than do retail customers.¹¹
- 56 In response to the concern that remotely accessible metering could be unnecessarily expensive, we have modified the text in the proposed rule to clarify that a utility may only require an interconnection customer to pay for remotely accessible metering when such capability is necessary to protect safety or reliability.
- 57 Cost Responsibility for Modifications to Interconnection Customer Facilities made Necessary by Utility Distribution System Modifications. Proposed WAC 480-108-040(14) states:

The interconnection customer is responsible for costs associated with future upgrades or modification to its generating facility or interconnection facilities

¹⁰ Survey of Interconnection Rules. United States Environmental Protection Agency filing in Docket UE-060649. July, 25, 2006.

¹¹ See, *Cole v. Washington Utils. & Transp. Comm’n*, 79 Wn.2d 302, 310-11, 485 P.2d 71 (1971) (unlawful rate discrimination does not result if groups of customers pay different rates based upon reasonable differences in the conditions or cost of service.)

made necessary by modifications the electrical company makes to its electric system.

- 58 King County, Allied and NWECC recommend that interconnection customers should not be responsible for costs to their systems made necessary by a utility's modification of its distribution system.
- 59 King County contends that this provision will preclude investment in distributed generation because it introduces uncertainty. King County recommends that the utility should pay the interconnection customer for any modifications it must make to accommodate decisions the utility makes regarding its system.
- 60 NWECC states that it believes post-interconnection changes made "to the utility system" should be covered by the utility. NWECC's comment appears to be off the point. The provision in question addresses post-interconnection changes to the customer's system, not the utility's system.
- 61 Allied contends that requiring the interconnection customer to bear the cost of modifying its system is "discriminatory." Allied recommends that these costs be shared by the utility and the customer, but offers no suggestion for a process to determine such sharing.
- 62 A customer's right to interconnect to the utility's facilities is not unqualified. The specific and general requirements contained in existing and proposed WAC 480-108 specify the conditions a customer's facilities must meet to be safe and otherwise compatible with the utility system with which the customer interconnects. Changes the utility makes to its system may change the conditions that the interconnection must meet in order to qualify for continued service. Absent a change in the qualifications a customer must meet for service, there is no reason additional cost responsibility should shift to the utility simply because the utility has found it necessary to modify its facilities after an interconnection service has begun.
- 63 Allied's contention about discrimination is again misplaced, because the qualifications an interconnection customer must meet are substantially different than those required of an ordinary retail customer.

64 The provision of the proposed rule in question is included in existing WAC 480-108-040(13). We understand that substantially the same provision is included in the interconnections standards of many municipal utilities in Washington. State policy favors uniformity in the rules and standards governing interconnections.¹² Where uniformity in standards exists, we should not depart without good reason. In this instance, we do not find good reason to depart from the uniformity existing among the interconnection standards. The provision is appropriate and should not be changed.

65 Restriction of Interconnection on Certain Feeders, Circuits, or Networks. Proposed WAC 480-108-040(11) reads:

The electric company also may restrict or prohibit new or expanded interconnected generating capacity on any feeder, circuit or network if engineering, safety or reliability studies indicate a need for restriction or prohibition.

66 King County and NWECC express concern that this provision may give the electric company too much flexibility to deny interconnections. King County asks who will determine what evidence supplied by the studies is sufficient to allow restriction of interconnection and who determines that standard. NWECC recommends that any decision to restrict interconnection under this provision should be subject to public review and approval of the Commission.

67 The dispute resolution provision at WAC 480-108-055 is available for any interconnection customer to dispute an electrical company's "denial or rejection" of an application for interconnection. In response to the concern raised by King County and NWECC, we clarify that the engineering, safety or reliability studies must establish, rather than indicate, a need for restrictions and we emphasize that the dispute resolution process is appropriate for resolving any conflicts regarding restrictions imposed under this section.

68 Interconnection Service Tariffs for Facilities Between 300 kW and 20 MW: WAC 480-108-080 requires electric companies to file interconnection service tariffs "equivalent in all procedural and technical respects" with the interconnection service

¹² Substitute Senate Bill (SSB) 5101, Chapter 300, Laws of 2005, codified at RCW 82.16.120(2).

the company is required to offer under its FERC tariff. WAC 480-108-090 allows a utility to file an alternative to its FERC tariff if it can demonstrate the provisions of the FERC tariff “will impair service adequacy, reliability, or safety or will otherwise be incompatible with its electric system.”

69 Allied argues that allowing utilities to file “separate interconnection procedures” does not “comprise a state standard” as intended by the PURPA amendments in the Energy Policy Act. The Commission’s authority is limited to investor-owned utilities. Accordingly, the Commission is not empowered to establish a “state standard.”

70 We recognize that practical uniformity among utilities and states regarding interconnection standards has value for promoting development of distributed generation resources. The proposed rules promote uniformity in several ways.

71 First, even though the rules would apply only to investor-owned utilities, they include a section addressing the category of facilities from zero to 300 kW of nameplate capacity in order to preserve as much as possible of a consensus proposal made jointly by the investor-owned and public utilities. This category is also intended to preserve the consistency that exists among the interconnection standards currently in force.

72 Second, the 300 kW to 20 MW provisions recognize that investor-owned utilities are required to offer interconnection service to grid facilities that are under FERC jurisdiction. The proposed rules require utilities to file interconnection service tariffs equivalent “in all procedural and technical respects” with the FERC tariffs in order to maintain uniformity in UTC-jurisdictional tariffs among the investor-owned utilities and between UTC- and FERC-jurisdictional tariffs. Indeed, reference to the FERC standards will help advance uniformity both in this state and with utilities in other states.

73 The proposed rules allow a utility to file an interconnection service tariff for 300 kW to 20 MW facilities that differs from the FERC tariff, but only if the utility proves the need for the variation. Any such variation will require Commission approval.

- 74 NWEC argues that the opportunity to file an alternative tariff under WAC 480-108-090 allows a utility to either “not comply or establish a different standard.” According to NWEC this is “inappropriate” and has no place in an interconnection standard because it is counter to a common standard across the state.
- 75 While the proposed rules establish a clear priority for the FERC standards, the alternative path is included in WAC 480-108-090 for two important reasons. First, the FERC standards may not have anticipated all circumstances affecting distribution systems, since FERC is most familiar with engineering at the transmission rather than distribution system level. Second, if some shortcoming or problem surfaces with the FERC standard, utilities need the ability to address the problem while continuing to offer interconnection service.
- 76 Disconnect Switch. Proposed WAC 480-108-020(2)(a) reads in relevant part:
- The electrical company must verify that the interconnection customer has furnished and installed on its side of the meter a UL-approved safety disconnect switch that can fully disconnect the interconnection customer’s generating facility from the electrical company’s electric system.
- 77 King County comments that requiring a disconnect switch for very small systems is costly and could discourage investment that would otherwise be made.
- 78 This provision exists in current WAC 480-108-020(2)(a). The question whether to retain the requirement of a disconnect switch was addressed at the December 15, 2006, rulemaking workshop. All participating parties and those submitting written comments on the workshop questions recommended that the requirement be retained. In particular, IBEW strongly supported retaining the disconnect switch requirement to protect worker safety.
- 79 The proposed rule allows the utility to waive this requirement if customer interconnection facilities perform disconnection internally. This is typically the case for the inverter-type facilities used by most small scale projects.

80 We will make no changes to the proposed text of WAC 480-108-020(2)(a), but we state our expectation that utilities will exercise discretion regarding this requirement, while at the same time ensuring that worker safety is not compromised. Any conflicts that arise under this requirement may be resolved under the dispute resolution processes provided in WAC 480-108-055.

81 Ability of the electric company to deny an interconnection request as not feasible. Proposed WAC 480-108-035(4) states in relevant part:

If the studies determine that the interconnection is not feasible, the electrical company will provide notice of the denial to the interconnection customer and the reasons for the denial.

82 Allied asserts that “all generator interconnection requests under 20 MW are “feasible.” Allied observes that the studies and costs will be detailed as a part of the supplemental review process and recommends that the interconnection customer should be able to choose whether to go ahead with a project.

83 WAC 480-108-055 and WAC 480-108-100 provide that any interconnection customer can dispute a utility’s denial of an interconnection request. In this case, the studies would produce the information regarding the necessary facilities and cost and the customer could argue that the project is feasible as long as the customer is willing to pay the cost.

84 Third-party cost estimates. Proposed WAC 480-108-035(4) states in relevant part:

Supplemental Review Process. If the electrical company determines that additional studies are required to determine the feasibility of the interconnection, the electrical company must notify the interconnection customer within thirty business days of when the application is deemed complete and provide the interconnection customer a form of agreement that includes a description of what studies are required and a good faith estimate of the cost and time necessary to perform the studies.

85 NWEC recommends that an interconnection customer should be allowed to consider a third-party estimate of costs for the necessary studies along with the utility's cost estimate.

86 We agree that consideration of cost estimates from third-parties willing and qualified to do the engineering studies found necessary by the utility would be beneficial. We have modified the text of proposed WAC 480-108-035(4) to provide that an interconnection customer may respond to the utility's good faith estimate of cost with a third-party cost estimate and proposal to accomplish the study work required by the utility. Should the utility and customer not reach agreement on study costs, the dispute resolution provisions at WAC 480-108-055 and WAC 480-108-100 specifically include "electrical company study costs."

87 Equipment pre-certification list. Proposed WAC 480-108-020(4) reads in relevant part:

Electrical companies may require interconnection customers to pay for testing and approval of the equipment proposed to be installed to ensure compliance with applicable technical specifications, in their most current approved version.

88 Allied recommends that an "equipment pre-certification" list be developed by either a technical standards working group or a state-sanctioned third-party. Allied argues that such a list will minimize the need for redundant testing and facilitate interconnection by informing customers and utilities of what equipment is acceptable.

89 We agree in principle that development of an equipment pre-certification list might well improve efficiency by eliminating the need for redundant studies. However, establishing a state-wide, continuing process to develop such a list to which all utilities in the state would defer is beyond the practical scope of our rulemaking. To avoid redundant studies and promote consistent and fair treatment of interconnection customers, we have qualified a utility's authority to require interconnection customers to pay for testing and approval of the equipment. When a utility has previously studied and approved equipment pursuant to WAC 480-108-020(4) it may not require additional or redundant studies of the same equipment without demonstrating why the additional study is necessary.

90 We acknowledge that a pre-certified list of approved equipment may be a good idea and encourage the utilities to work together and with the industry to establish a list to which each utility will defer. The proposed rule gives utilities the discretion to require equipment testing. We expect utilities will exercise this discretion in as cost-effective a way as possible.

91 **COMMISSION ACTION:** After considering all of the information regarding this proposal, the Commission finds and concludes that it should adopt the rules in the CR-102 Notice at WSR# 07-14-150, with the modifications discussed in this order.

92 **CHANGES FROM PROPOSAL:** The Commission adopts the proposal noticed at WSR # 07-14-150 with minor editorial changes and the following changes to text necessary for clarification and response to comments as discussed above. In addition, in light of the time required for the additional process opportunities the Commission provided stakeholders following the adoption hearing in this docket, the date by which electrical companies must file tariffs under WAC 480-108-060, WAC 480-108-080 and WAC 480-108-090 is set at January 31, 2008, instead of December 31, 2007, as previously stated in the proposed rules.

93 For clarification, proposed WAC 480-108-001(4) is modified to read as follows:

(4) This chapter does not govern interconnection of, or electrical company services to, PURPA qualifying facilities pursuant to WAC 480-107.

94 For clarification, proposed WAC 480-108-020(1)(f)(i) is modified to read as follows:

(i) Code and standards. All interconnections must conform to all applicable codes and standards for safe and reliable operation. Among these are the National Electric Code (NEC); National Electric Safety Code (NESC); the standards of the Institute of Electrical and Electronics Engineers (IEEE); standards of the North American Electric Reliability Corporation (NERC); the standards of the Western Electricity Coordinating Council (WECC); American National Standards Institute (ANSI); Underwriters Laboratories (UL) standards; local, state and federal building codes, and ~~the~~ any electrical company's written electric service requirement, if any-approved by the commission. Electrical companies may require verification that an

interconnection customer has obtained all applicable permit(s) for the equipment installations on its property.

95 For clarification, proposed WAC 480-108-020(2)(e) is modified to read as follows:

(e) The electrical company must verify on the basis of evidence provided by the interconnection customer that ~~the~~ a generating facility interconnected to a grid network distribution system or a spot network distribution system will not never-cause impair public safety or quality of service to the electrical company's other customers as a result of reverse current flow through the electrical company's network protectors.

96 For clarification, WAC 480-108-040(7)(b) is modified to read as follows:

(b) Production metering: The electrical company may require separate metering for production, including, if necessary for safety or reliability, metering capable of being remotely accessed. This meter will record all generation produced and may be billed separately from any net metering or customer usage metering. Costs associated with production metering will be paid by the interconnection customer.

97 Proposed WAC 480-108-035(4) is modified to read as follows:

(4) Supplemental review process. If the electrical company determines that additional studies are required to determine the feasibility of the interconnection, the electrical company must notify the interconnection customer within thirty business days of when the application is deemed complete and provide the interconnection customer a form of agreement that includes a description of what studies are required and a good faith estimate of the cost and time necessary to perform the studies. Within thirty business days after receiving the agreement, the interconnection customer may supply an alternative cost estimate from a third-party qualified to perform the studies required by the electrical company. After the electrical company and the interconnection customer agree on the estimated cost of the required studies and the identity of parties to perform the required studies the interconnection customer must execute and return the completed agreement within thirty business days along with any deposit required by the electrical company not to exceed the lower of one thousand dollars, or fifty percent of the estimated study cost.

98 Proposed WAC 480-108-020(4) is modified to read as follows:

(4) In addition to the requirements in subsections (2) and (3) of this section, all noninverter-based interconnections and all inverter-based interconnections failing to meet the requirements of subsection (3) of this section may require more detailed electrical company review. The electrical company must demonstrate the need for additional testing and approval of equipment if the same equipment has been tested and approved previously for any of the electrical company's interconnection customers. Electrical companies may require interconnection customers to pay for needed testing and approval of the equipment proposed to be installed to ensure compliance with applicable technical specifications, in their most current approved version, including:

- (a) IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, for systems 10 MVA or less; and
- (b) ANSI Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.

99 For clarification, proposed WAC 480-108-040(11) is modified to read as follows:

The electric company also may restrict or prohibit new or expanded interconnected generating capacity on any feeder, circuit or network if engineering, safety or reliability studies ~~indicate~~ establish a need for restriction or prohibition.

100 For clarification, proposed WAC 480-108-060(1) is modified to read as follows:

(1) By January 31, 2008, the electrical company must file for commission approval, as part of its tariff, and maintain on file for inspection at its place of business, the charges, terms and conditions for interconnections pursuant to Part 1 of this chapter. Such filing must include model forms of the following documents and contracts:

- (a) Application;
- (b) Interconnection agreement;
- (c) Feasibility study agreement;
- (d) Construction agreement; and
- (e) Certificate of completion.

101 Proposed WAC 480-108-080(1) is modified to read as follows:

(1) No later than January 31, 2008, ~~December 31, 2007~~, each electrical company over which the commission has jurisdiction must file an interconnection service tariff for facilities with nameplate generating capacity greater than 300 kW but no more than 20 MW.

102 Proposed WAC 480-108-090(1) is modified to read as follows:

(1) 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 no later than January 31, 2008 ~~December 31, 2007~~, an alternative to the interconnection service tariff required in WAC 480-108-080.

103 **STATEMENT OF ACTION; STATEMENT OF EFFECTIVE DATE:** After reviewing the entire record, the Commission determines that WAC 480-108-001, WAC 480-108-005, WAC 480-108-010, WAC 480-108-020, WAC 480-108-030, WAC 480-108-040, WAC 480-108-050, WAC 480-108-060, and WAC 480-108-999 should be revised as set forth in Appendix A, as rules of the Washington Utilities and Transportation Commission, to take effect pursuant to RCW 34.05.380(2) on the thirty-first day after filing with the Code Reviser.

104 After reviewing the entire record, the Commission determines that WAC 480-108-015, WAC 480-108-035, WAC 480-108-055, WAC 480-108-065, WAC 480-108-070, WAC 480-108-080, WAC 480-108-090, WAC 480-108-100, WAC 480-108-110, and WAC 480-108-120 should be adopted as set forth in Appendix A, as rules of the Washington Utilities and Transportation Commission, to take effect pursuant to RCW 34.05.380(2) on the thirty-first day after filing with the Code Reviser.

105 By revising and adopting these rules, the Commission has fulfilled its obligations under amendments made to PURPA in section 1245(a) of the 2005 Energy Policy Act codified at 16 U.S.C 2621(d)(15).

ORDER

106 THE COMMISSION ORDERS:

107 The Commission amends WAC 480-108-001, WA 480-108-005, WAC 480-108-010, WAC 480-108-020, WAC 480-108-030, WAC 480-108-040, WAC 480-108-050, WAC 480-108-060, and WAC 480-108-999 to read as set forth in Appendix A, as rules of the Washington Utilities and Transportation Commission, to take effect pursuant to RCW 34.05.380(2) on the thirty-first day after filing with the Code Reviser.

108 The Commission adopts WAC 480-108-015, WAC 480-108-035, WAC 480-108-055, WAC 480-108-065, WAC 480-108-070, WAC 480-108-080, WAC 480-108-090, WAC 480-108-100, WAC 480-108-110, and WAC 480-108-120, as set forth in Appendix A, as rules of the Washington Utilities and Transportation Commission, to take effect on the thirty-first day after the date of filing with the Code Reviser pursuant to RCW 34.05.380(2).

109 This Order and the rules set out below, after being recorded in the register of the Washington Utilities and Transportation Commission, shall be forwarded to the Code Reviser for filing pursuant to RCW 80.01, RCW 34.05 and WAC 1-21.

DATED at Olympia, Washington, September 27, 2007.

WASHINGTON STATE UTILITIES AND TRANSPORTATION COMMISSION

MARK H. SIDRAN, Chairman

PATRICK J. OSHIE, Commissioner

PHILIP B. JONES, Commissioner

Note: The following is added at Code Reviser request for statistical purposes:

Number of Sections Adopted in Order to Comply with Federal Statute: New 0, amended 0, repealed 0; Federal Rules or Standards: New 10, amended 9, repealed 0; or Recently Enacted State Statutes: New 10, amended 9, repealed 0.

Number of Sections Adopted at Request of a Nongovernmental Entity: New 0, amended 0, repealed 0.

Number of Sections Adopted on the Agency's own Initiative: New 10, amended 9, repealed 0.

Number of Sections Adopted in Order to Clarify, Streamline, or Reform Agency Procedures: New 0, amended 0, repealed 0.

Number of Sections Adopted using Negotiated Rule Making: New 0, amended 0, repealed 0; Pilot Rule Making: New 0, amended 0, repealed 0; or Other Alternative Rule Making: New 0, amended 0, repealed 0.