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May 9, 2007

***VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY***

Oregon Public Utility Commission
550 Capitol Street NE, Suite 215
Salem, OR 97301-2551

Attention: Vikie Bailey-Goggins
Administrator, Regulatory Operations

Re: **Docket No. AR 515**
In the Matter of a Rulemaking to Adopt Rules Related to Net Metering
Waiver of Paper Service Requested

Enclosed for filing by PacifiCorp dba, Pacific Power & Light Company ("PacifiCorp" or "the Company") is PacifiCorp's Comments in the above-captioned docket.

It is respectfully requested that the following persons be added to the service list in this docket. We request waiver of paper service in this proceeding.

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Informal questions may be directed to Joelle Steward at (503)-813-5542.

Sincerely,

A handwritten signature in cursive script that reads "Andrea L. Kelly" followed by a stylized flourish.

Andrea L. Kelly
Vice President, Regulation

Enclosure

cc: Service List for Docket No. AR 515

To that end, PacifiCorp recommends the following language change to proposed OAR 860-039-0015(2):

OAR 860-039-0015(2) – Except for customer-generators established as net metering customers prior to July 1, 2007, a customer-generator of a public utility must install and maintain a manual disconnect switch that will disconnect the net metering facility from the public utility’s system and the customer-generator’s electric service. The disconnect switch must be a lockable, load-break switch that plainly indicates whether it is in the open or closed position. The disconnect switch must be readily accessible to the public utility at all times and located within 10 feet of the public utility’s meter.

~~(a) For customer services of 600 volts or less, a public utility may not require a disconnect switch for a net metering facility that is inverter-based with a maximum rating as shown below.~~

Service Type	Maximum Net Metering Facility Size (kW)
240 Volts, Single-phase, 3 Wire	7.2
120/208 Volts, 3 Phase, 4 Wire	10.5
120/240 Volts, 3 Phase, 4 Wire	12.5
277/480 Volts, 3 Phase, 4 Wire	25.0
For other service types, the net metering facility must not impact the customer-generator’s service conductors by more than 30 amperes.	

~~(b) The disconnect switch may be located more than 10 feet from the public utility meter if permanent instructions are posted at the meter indicating the precise location of the disconnect switch. The public utility must approve the location of the disconnect switch prior to the installation of the net metering facility.~~

C. Aggregation of Meters

As originally proposed, staff’s draft net metering rules did not allow for aggregation of meters. However, as presented in AR 515, proposed OAR 860-039-0065 requires utilities to aggregate meters at the customer-generator’s request under certain circumstances. PacifiCorp believes that aggregation is undesirable

because of the administrative complexity it imposes. The billing and crediting processes required for aggregation will require manual intervention, which increases PacifiCorp's administrative and billing costs.

Notwithstanding these concerns, the conditions that staff has added for aggregation in the proposed rules are a marked improvement. These conditions are that additional meters must be on the customer-generator's contiguous property, must be on the same rate schedule and must be served by the same primary feeder. The inclusion of these conditions is an important step towards reducing the administrative burden created by aggregation. To this end, PacifiCorp recommends the following language be added to the rule:

860-039-0065(2) - A customer-generator must give at least 60 days notice to the utility to request that additional meters be included in meter aggregation. The specific meters must be identified at the time of such request. In the event that more than one additional meter is identified, the customer-generator must designate the rank order for the additional meters to which net metering credits are to be applied, in accordance with section (4).

Lastly, because PacifiCorp does not believe other customers should bear the added administrative and billing costs of aggregation, PacifiCorp will file with the Commission a fee to recover these additional costs, pursuant to proposed OAR 860-039-0065(7).

D. User vs. Owner

Under the proposed rule, it appears that the owner of a net metering facility and the customer-generator or user of the net meter facility can be two different entities. In PacifiCorp's experience interconnection can become very complex where the owner and the user of a distributed generation facility are different entities. For example, under such circumstances it is generally necessary for the owner and the user to have an agreement governing distribution of the benefits and burdens of the generation facility. It is also generally necessary for the utility to have one or more agreements with both the owner and the user in order to adequately address interconnection issues, interconnection costs, the distribution of credits and other costs and benefits of interconnection and the associated generation. The complexities that arise when the owner and the user are different entities are often case specific and difficult to anticipate. During the informal workshop process, PacifiCorp commented on the challenges presented by this issue and recommended that the proposed rules address the circumstances where the owner and the user are different entities. The rules proposed in AR 515 do not appear to specifically address the issue.

PacifiCorp continues to be concerned that the proposed rules are inadequate to address the complexities that arise when the owner and the user of net generating facilities are different entities. In the event the final rules do not specifically address this issue, PacifiCorp intends to rely on the waiver contained in proposed OAR 860-039-0005(2) to

seek extension of required timelines, when necessary, to address the complexities that arise when the user and the owner of a net metering facility are different entities.

E. Queue Position

PacifiCorp understands that utilities will maintain a single queue for all types of interconnection requests. For example, where a utility receives a properly completed interconnection request for a qualifying facility on day one, a properly completed interconnection request for a wholesale generator on day two, and a properly completed interconnection request for a net metering facility on day three; the utility will queue the three projects in the order the interconnection requests were received.

F. Consistency of Net Metering Interconnection Process with Oregon's General Interconnection Process

Under ORS 757.300(8), net metering is mandated only for facilities with capacity of 25 kilowatts or less. However, the statute does authorize the Commission to provide by rule for higher limits for customers of a public utility. During the informal workshop process, stakeholders (including PacifiCorp and Portland General Electric) were able to agree on expanding the scope of the net metering requirements to embrace net metering facilities up to 2 megawatts in capacity under certain circumstances. The utilities agreed to this expansion in the scope of net metering rules based on stakeholders' agreement that the net metering review process for net metering facilities in excess of 25 kilowatts capacity would be essentially identical to the State of Oregon's general interconnection review requirements for similarly sized distributed generation facilities.

At present, Commission staff is conducting an informal workshop to develop proposed rules governing interconnection generally. In that proceeding the stakeholders have developed a level of interconnection review (presently designated Level 4 review) that is analogous to Level 3 review under the proposed net metering rule. PacifiCorp understands that Commission staff intends that the timelines and other procedural and study requirements contained in a Level 3 net metering interconnection review and a Level 4 general interconnection review will be the same. PacifiCorp has been able to support expansion of the net metering facility cap to 2 megawatts based on its understanding that the review of, study of, and timing of net metering interconnections and other types of interconnections above 25 kilowatts will be the same.

G. Spot and Area Networks

PacifiCorp is concerned that net metering interconnection to spot and area networks such as the networks operated in the Portland metropolitan area will lower reliability on infrastructure expressly built for high reliability. PacifiCorp recommends that all net metering interconnections to spot and area networks should be subject to level three review. This would allow the utility to individually model the interconnection on the

associated network. To this end, PacifiCorp recommends the following additional language in proposed 860-0039-0035(2)(i):

860-0039-0035(2)(i) – A net metering facility’s point of common coupling will not be on a transmission line, a spot network, or an area network.

PacifiCorp also recommends the complete deletion of proposed 860-0039-0035(2)(j):

~~860-0039-0035(2)(j) – If a net metering facility's proposed point of common coupling is on a spot or area network, the interconnection will meet the following requirements, in addition to the requirements in sections (3) through (7) of this rule:~~

~~(A) For a net metering facility that will be connected to a spot network circuit, the aggregate generation capacity connected to that spot network from the net metering facilities, and any generating facilities, will not exceed five percent of the spot network's maximum load;~~

~~(B) For a net metering facility that utilizes inverter based protective functions, which will be connected to an area network, the net metering facility, combined with other any generating facilities on the load side of network protective devices, will not exceed 10 percent of the minimum annual load on the network, or 500 kilowatts, whichever is less. For the purposes of this paragraph, the percent of minimum load for solar electric generation net metering facility will be calculated based on the minimum load occurring during an off peak daylight period; and~~

~~(C) For a net metering facility that will be connected to a spot or an area network that does not utilize inverter based protective functions, or for an inverter based net metering facility that does not meet the requirements of subsections (A) or (B) of this section, the net metering facility will utilize low forward power relays or other protection devices that ensure no export of power from the net metering facility, including inadvertent export (under fault conditions) that could adversely affect protective devices on the network.~~

H. Rates for Electric Service to Net Meter Customers

It is PacifiCorp’s understanding that the proposed net metering rules do not modify the rate schedule that will apply to electricity sold to a customer-generator. See Proposed OAR 860-039-0055 (“Each monthly billing period, the public utility will charge the customer-generator the minimum monthly charge and all applicable charges for the net electricity that the public utility supplied”). For example, a residential customer-

generator would be billed for any net power consumption under Oregon Rate Schedule 4, while a non-residential customer-generator with a load above 1 megawatt and net metering facilities above 1 megawatt in capacity would be billed for any net power consumption under Oregon Rate Schedule 47. Schedule 47 applies to any customer who has both retail load and on-site generation of 1 MW or more and who requires standby electric service from the company. In addition, PacifiCorp understands that recovery for line extension costs and other utility investments to serve a particular customer-generator would continue to be recovered as part of the regular provision of retail service to the customer-generator.

I. Define “Inverter-based net metering facility”

PacifiCorp recommends that proposed OAR 860-039-005(3) be modified to add the following definition for “Inverter-based net metering facility” a term which is used repeatedly in the proposed rule but which has not been defined:

(n) “Inverter-based net metering facility” means a net metering facility that uses inverter-based technology that satisfies the requirements of IEEE standards for inverters.

J. Define “Annual peak load for the circuit”

PacifiCorp recommends that proposed OAR 860-039-005(3) be modified to add the following definition for “Annual peak load of the circuit,” a term which PacifiCorp suggests be used to more precisely address the concept of “maximum load” referred to in several of the net metering interconnection review screens (see comment L.5. and L.8. below):

(a) “Annual peak load for the circuit” means the maximum kW load in any 15 minute interval measured at the circuit during the previous 12 month period.

K. Notice

PacifiCorp recommends the addition of the following rule regarding notice to clarify how and when a party satisfies the notice requirements imposed throughout the proposed rules:

860-039-0085
Notice

Whenever the utility is required to give written notice to the customer-generator under these net metering rules, the utility may send such notice via electronic mail if the customer-generator has provided an electronic mail address. If the customer-generator has not provided an electronic mail address, or has requested in writing to be notified by United states

mail, or if the utility elects to provide notice by United States mail, then written notices from the utility shall be sent via First Class United States mail. The utility shall be deemed to have fulfilled its duty to respond under these rules on the day its sends the customer-generator notice via electronic mail or deposits such notice in First Class mail. The customer-generator shall be responsible for informing the utility of any changes to its notification address.

L. Minor Language Revisions

PacifiCorp recommends the following minor revisions to the language of the proposed rules:

1. Modify definition of “Point of common coupling” – PacifiCorp recommends the following revision to the definition in order to increase clarity:

860-039-0005(3)(o) – “Point of common coupling” means the point beyond the customer-generator’s meter where the customer-generator facility connects with the electric distribution system.

2. Modify proposed OAR 80-039-0025(1)(a) – PacifiCorp recommends the following minor revisions to increase clarity:

860-039-0025(1)(a) – The name of the applicant and the public utility involved;

3. Modify proposed OAR 860-039-0030(4)(a) – PacifiCorp recommends the following minor revisions to increase clarity:

860-039-0030(4)(a) – The net metering facility meets all applicable criteria and the interconnection will be approved upon installation of any required meter upgrade, completion of any required inspection of the facility, and execution of an ~~fully executed~~ interconnection agreement; or

4. Modify proposed OAR 860-039-0030(5) – PacifiCorp recommends the following revision to make it clear that interconnection requests deemed approved because of a lack of timely action by the utility are still subject to the requirement that the customer-generator provide the utility with at least five-days notice of intent to start operation of the net metering facility:

860-039-0030(5) – If the public utility does not notify a Level 1 applicant in writing or by electronic mail whether the interconnection is approved or denied within 20 business days after the receipt of an application, the interconnection will be deemed approved. Interconnections approved under this subsection remain subject to subsection 8 below.

5. Modify proposed OAR 860-039-0035(2)(a) – PacifiCorp recommends the following revision to increase clarity:

860-039-0035(2)(a) – The aggregate generation capacity on the distribution circuit to which the net metering facility will interconnect, including the capacity of the net metering facility, will not cause any distribution protective equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or customer equipment on the electric distribution system, to exceed 90 percent of the short circuit interrupting capability of the equipment. In addition, a net metering facility will not be connected to a circuit whose annual peak load for the circuit that already exceeds 90 percent of the short circuit interrupting capability, prior to interconnection of the facility.

6. Modify proposed OAR 860-039-0035(2)(f) – PacifiCorp recommends inserting a dash between the terms “single” and “phase” as follows:

860-039-0035(2)(f) – If a net metering facility is to be connected to three-phase, four wire primary public utility distribution lines, a three-phase or single-phase generator will be connected line-to-neutral and will be effectively grounded.

7. Correction to proposed OAR 860-039-0035(2)(j) - In the event PacifiCorp’s recommendation to completely delete 860-039-0035(2)(j) is not adopted by the Commission (see PacifiCorp’s comment G above), PacifiCorp believes this section contains a reference error and recommends that following correction:

860-039-0035(2)(j) – If a net metering facility’s proposed point of common coupling is on a spot or area network, the interconnection will meet the following requirements, in addition to the requirements in sections ~~(3) through (7)~~ (a) through (i) of this rule:

8. Modify proposed OAR 860-039-0035(2)(j)(A) – In the event PacifiCorp’s recommendation to completely delete 860-039-0035(2)(j) is not adopted by the Commission (see PacifiCorp’s comment G above), PacifiCorp recommends the following revision to increase clarity:

860-039-0035(2)(j)(A) – For a net metering facility that will be connected to a spot network circuit, the aggregate generation capacity connected to that spot network from the net metering facilities, and any generating facilities, will not exceed five percent of the spot network’s annual peak load for the circuit maximum load;

9. Modify proposed OAR 860-039-0035(2)(j)(C) – PacifiCorp recommends inserting a dash between the terms “inverter” and “based” as follows:

860-039-0035(2)(j)(C) – For a net metering facility that will be connected to a spot or an area network that does not utilize inverter-based protective functions, or for an inverter-based net metering facility that does not meet the requirements of subsections (A) or (B) of this section, the net metering facility will utilize low forward power relays or other protection devices that ensure no export of power from the net metering facility, including inadvertent export (under fault conditions) that could adversely affect protective devices on the network.

PacifiCorp appreciates the opportunity to participate in the informal workshop on net metering rules and in this formal rulemaking on the subject.

DATED this 9th day of May 2007.

Respectfully submitted,

A handwritten signature in black ink that reads "Andrea L. Kelly" followed by a stylized flourish.

Andrea L. Kelly
Vice President, Regulation
PacifiCorp

CERTIFICATE OF SERVICE

I certify that I have cause to be served the foregoing **PACIFICORP COMMENTS** in OPUC Docket No. AR 515 by electronic mail and first class mail to the parties on the attached service list.

DATED this 9th day of May, 2007.

/s/ 
Peggy Ryan

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AR 515**

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