CASE: UM 1129
WITNESS: Brown

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 2200

Direct Testimony

March 24, 2006

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Dr. Stefan Brown. My business address is 550 Capitol Street NE, Suite 215, Salem, Oregon 97301-2551.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. My Witness Qualification Statement is found in Exhibit Staff/2201.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses Issue 14 and Issue 3.b. dealing with provisions of PacifiCorp's and Portland General Electric's (PGE's) contracts for purchase of off-system Qualifying Facility (QF) power.

Q. DID YOU PREPARE AN EXHIBIT FOR THIS DOCKET?

A. Yes, I prepared Staff Exhibit 2202.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is organized as follows:

ISSUE 14, TARIFF PROVISIONS FOR PURCHASES FROM OFF-SYSTEM QFS

Q. ARE THE METERING PROVISIONS IN PACIFICORP'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. Yes. PacifiCorp circulated among the parties a revised Purchase Power Agreement on March 22, 2006, that requires a QF provide PacifiCorp with metered hourly Facility Net Output and other energy measurements required to administer the agreement. The QF must also provide telemeter data if required by the Transmitting Entity and the data are useful to administer the agreement.[1] The data are readily available from the necessary metering equipment, and are necessary to verify that PacifiCorp is only paying for the energy it receives.

Section 8.1 also states, "energy purchased … shall be adjusted to account for electrical losses, if any, between the point of metering and the Point of Interconnection." This provision is acceptable if the intention is to not charge a QF for losses when the QF generates and delivers energy to the transmission provider/owner (TO) to offset losses. In this case, the net output of the facility should be reduced by the amount of energy the QF generates to offset losses that are returned in kind to the TO.

[1] See Section 8.1. Staff understands that PacifiCorp will officially file the final version of the agreement, which PacifiCorp has represented will be the same as the draft it earlier circulated, in this docket on March 24, 2006.

Q. ARE THE METERING PROVISIONS IN PGE'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. PGE's off-system QF tariff does not include metering provisions. QFs are required, under Section 4.5 to maintain and provide PGE access to at least two years of records of Net Output and imbalance information. The records should be sufficient to allow PGE to verify the amount of energy that a QF has generated and delivered.

Q. ARE THE TELEMETRY PROVISIONS IN PACIFICORP'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. Yes. Section 8.1 states that PacifiCorp is entitled to telemeter data if the Transmitting Entity requires it and the data are useful to PacifiCorp's administration of the agreement. This requirement should not impose unnecessary metering costs on the QF.

Q. ARE THE TELEMETRY PROVISIONS IN PGE'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. PGE's tariff does not include any telemetry provisions. Telemetry provisions are not necessary for off-system QFs for which PGE is neither providing ancillary services nor dispatching the unit.

Q. ARE THE DATA EXCHANGE PROVISIONS IN PACIFICORP'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. Yes. PacifiCorp should be able to require that QFs submit data in a format that is readily accessible and usable by the company. Section 6, page 2 of Addendum W deals with net output reporting requirements. PacifiCorp is asking for hourly station service, Excess Output[2] and Net Output[3] in columnar format. In addition, the company is asking to be provided with an electronic copy upon request. These conditions seem reasonable and appropriate because they will allow PacifiCorp to verify the amount of energy that a QF has generated, delivered and should be paid for. Further, the data should be readily available as output from the facility's metering equipment.

Q. ARE THE DATA EXCHANGE PROVISIONS IN PGE'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. Yes. Section 4.5 of Appendix 2 requires that a QF provide a preschedule for all deliveries of energy on the last business day prior to the scheduled delivery date, and that parties coordinate hourly real-time schedules. In the absence of real-time schedule changes, the preschedule will be considered final. Both PGE and the QF will maintain records of hourly energy schedules with the final E-Tag[4] being the controlling evidence. Further, the QF needs to maintain records for at least two years of hourly Net Output. These provisions appear sufficient to ensure that PGE will have the data necessary to pay the QF for its scheduled and delivered net output. Further, the data should be readily available as output from the facility's metering equipment.

[2] See PacifiCorp Power Purchase Agreement, Section 1.12.
[3] See PacifiCorp Power Purchase Agreement, Section 1.24.

[4] An E-Tag or "Electronic Tag" is an electronic record that includes the Point of Receipt, the Point of Delivery, the MW to be delivered, the start and end time of the transaction.

Q. ARE THE PRODUCTION BALANCING PROVISIONS IN PACIFICORP'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. Yes. Under federal PURPA, utilities are required to purchase the net output of a QF, but no more than the net output, at avoided cost. While scheduling convention only allows for scheduling whole megawatts, facilities do not generate energy in one-MW unit increments. Additionally, the nameplate rating of facilities is not necessarily in whole megawatts. As a result, there may be a mismatch between scheduled output and actual generation. This is especially problematic for small facilities.

In its proposed standard contract for off-system QFs, PacifiCorp has included an Energy Imbalance Accumulation (EIA) that provides the opportunity for a QF to match its scheduled deliveries with its actual net output during off peak and on peak periods across the Settlement Period. The QF would net the differences between the hourly transmission schedule and net output over the Settlement Period. The Settlement Period is initially one month, but it may be expanded up to one year at PacifiCorp's discretion.

Another provision of the EIA is that PacifiCorp will pay for the lesser of delivered energy and actual net output for on peak and off peak hours summed across the Settlement Period. Utilities are required to purchase the net output, but not more than net output, of QFs. If actual energy deliveries exceed net output during the Settlement Period, the utility should only be required to pay for the QF's net output— the maximum amount of energy that PURPA requires the utilities to purchase. If, instead, net output exceeds energy deliveries during the Settlement Period, the utility should only be required to pay for energy deliveries because that is the amount of power that it receives from the transmitting utility. This provision is designed to protect PacifiCorp and its customers from paying avoided costs for energy it either does not receive or that is in excess of QF net output. In addition, it provides an incentive for a QF to accurately schedule its output across the settlement period.

While the excess energy may not be worth the on peak price, it is not without value. Therefore, while not required by PURPA, I recommend that PacifiCorp consider modifying its agreement by adding a provision that states that the company will pay QFs the off-peak price for energy delivered in excess of actual net output in the settlement period.

Q. ARE THE PRODUCTION BALANCING PROVISIONS IN PGE'S POWER PURCHASE AGREEMENT FOR OFF-SYSTEM QFS APPROPRIATE?

A. Yes, but the language in Schedule 201 should be clarified. While PGE's contract does not include specific balancing provisions, the contract does implicitly include them. In Appendix 2, Section 1.2, PGE defines the "Billing Period" as a calendar month. In addition, Section 4.5 of Appendix 2 requires that the "seller shall make commercially reasonable efforts to schedule in any hour an amount equal to its expected Net Output for such hour."

From these two provisions and an e-mail response by PGE witness Mr. Doug Kuns[5] I conclude that PGE will allow a QF to follow scheduling convention by

[5] See Staff Exhibit 2202.

scheduling in whole units even when its expected net output is not in whole units, and that PGE will pay for the scheduled and delivered energy generated by the QF. In the e-mail response, Mr. Kuns stated that it is PGE's "intent as stated in Section 4.5, that the QF will be able to use commercially reasonable efforts to schedule and deliver its Net Output to PGE" and "the scheduling requirements for whole MW increments is acceptable within our proposed agreement, even if the QF production may be higher or lower than the scheduled amount in an hour." *See* Staff/2202.

However, I conclude that there is a conflict in the language between the proposed standard contract for off-system QFs and Schedule 201. Section 1.6 of the Standard Contract defines Contract Price as "the applicable price for Delivered Net Output…" This definition applies to the pricing options in Sections 5.1, 5.2 and 5.3. In contrast, in Schedule 201, page 4, PGE states that "pricing options represent the purchase price per MWh the Company will pay for electricity delivered … up to the nameplate rating of the QF in any hour. Any energy delivered in excess of the nameplate rating shall be purchased at the applicable Off-Peak Prices for the selected pricing option." This implies that PGE will not pay avoided costs for scheduled delivery in an hour greater than nameplate rating.

For example, assume that a QF has a nameplate rating of 3.5 MW, generates 3.5 MW in each hour, and schedules 3 MW in half of the hours and 4 MW in the remaining hours in the billing period (ignoring on-peak and off-peak periods for purposes of this example). On average, over the billing period the QF would have scheduled and generated, and the TO would have delivered, 3.5 MW per hour. Therefore, the QF may reasonably expect to be paid avoided cost for all of its output. The language in Schedule 201 implies that PGE would pay the avoided cost for 3.5 MW per hour, but would only pay the off-peak price for the "extra" 0.5.MW that was delivered in hours when 4 MW was scheduled and delivered. This apparent conflict in language should be resolved, and the tariff should make clear that PGE will allow balancing within the billing period.

Q. IS IT REASONABLE FOR A UTILITY TO REQUIRE AN OFF-SYSTEM QF TO USE FIRM TRANSMISSION FOR DELIVERY OF POWER UNDER A STANDARD CONTRACT FOR OFF-SYSTEM QFS?

A. Yes. The utilities have proposed that their standard off-system QF contracts specify the use of firm transmission. If a QF wants to use non-firm transmission to deliver its output to the purchasing utility it may do so, but it would not receive capacity payments and would have to execute a non-standard contract.

ISSUE 3b, COST AND CONTRACTUAL PROVISIONS NECESSARY TO PURCHASE OFF-SYSTEM QF POWER

Q. ARE THE COST AND CONTRACTUAL PROVISIONS IN PGE'S AND PACIFICORP'S POWER PURCHASE AGREEMENTS FOR OFF-SYSTEM QFS APPROPRIATE?

A. Some of the provisions are not appropriate. PGE's implicit balancing provisions are not appropriate as written. However, PGE has clarified its intention in an e-mail to Staff.[6] I recommend that PGE modify the language in Schedule 201 to clarify its intent to allow for netting of differences between Net Output and delivered energy across the billing period.

Also, consistent with my recommendation under Issue 14 earlier, while not required by PURPA, I recommend PacifiCorp consider modifying its agreement by adding a provision that states the company will pay QFs the off-peak price for energy delivered in excess of actual net output in the settlement period.

Q. WILL STAFF BE SUBMITTING A BRIEF DISCUSSING THE COMMISSION'S JURISDICTION TO APPROVE THESE CONTRACTS?

A. No, staff understands that no party is challenging the Commission's jurisdiction to approve these contracts. As such, staff will not be filing a brief concerning the Commission's jurisdiction to review and approve these contracts.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

[6] See Staff Exhibit 2202.

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WITNESS: Brown

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 2201

Direct Testimony

March 24, 2006

WITNESS QUALIFICATION STATEMENT

NAME:	Stefan Michael Brown
EMPLOYER:	Public Utility Commission of Oregon
TITLE:	Senior Economist, Economic Research & Financial Analysis Division
ADDRESS:	550 Capitol Street NE Suite 215, Salem, Oregon 97301-2115.
EDUCATION:	Ph.D. Purdue University, West Lafayette, Indiana Major: Ag. Economics; 1995
	M.S. University of Wyoming, Laramie, Wyoming Major: Economics; 1991
	B.S. Oregon State University, Corvallis, Oregon Majors: Ag./Resource Economics, Animal Science; 1983
EXPERIENCE:	Starting in November 1999, I have been employed by the Public Utility Commission of Oregon. Current responsibilities include leading research and providing technical support on a wide range of policy issues for electric and gas utilities.
	From March 1996 to November 1999 I worked as a consultant in the energy field working for electric research organizations, electric power exchanges, electric utilities and petroleum producers. Duties included leading research projects on various policy issues involving energy markets and electricity restructuring. I also worked as a consultant in the energy field from January 1986 to August 1989
OTHER EXPERIENCE:	From August 1991 through March 1995, I was a graduate research and teaching assistant at Purdue University.
	From August 1989 through May 1991 I was a graduate research and teaching assistant at the University of Wyoming.
	From August 1990 through May 1991 I was an instructor at the University of Wyoming teaching introductory microeconomics.

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STAFF EXHIBIT 2202

Direct Testimony

March 24, 2006

E-mail received from Mr. Doug Kuns on March 13, 2003.

Regarding your telephone question about the out of service area standard contract with respect to scheduled and delivered QF power. It is our intent as stated in Section 4.5, that the QF will be able to use commercially reasonable efforts to schedule and deliver its Net Output to PGE. The Net Output and Nameplate Capacity Rating definitions provide the objective measures to assure that the Company purchases only the QF's Net Output. Section 4.5 accommodates the requirements placed on a QF from a transmitting entity to schedule QF power within certain parameters. For example, the scheduling requirements for whole MW increments is acceptable within our proposed agreement, even if the QF production may be higher or lower than the scheduled amount in an hour. PGE will purchase the scheduled and delivered energy.

Schedule 201 provides that the Company will purchase in accordance with the appropriate agreement, QF energy delivered to the Company's system and made available for purchase.

CERTIFICATE OF SERVICE

I certify that on March 24, 2006, I served the foregoing upon all parties of record in this proceeding by delivering a copy by electronic mail and by mailing a copy by postage prepaid first class mail or by hand delivery/shuttle mail to the parties accepting paper service.

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