EXHIBIT NO. _____ (JMR-11T)
DOCKET NO. UE-031725
2003 POWER COST ONLY RATE CASE
WITNESS: JULIA M. RYAN

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. PUGET SOUND ENERGY, INC., Respondent.	Docket No. UE-031725

REBUTTAL TESTIMONY OF JULIA M. RYAN ON BEHALF OF PUGET SOUND ENERGY, INC.

FEBRUARY 13, 2004

PUGET SOUND ENERGY, INC.

REBUTTAL TESTIMONY OF JULIA M. RYAN

Q: Are you the same Julia M. Ryan who submitted direct testimony in this proceeding on behalf of Puget Sound Energy, Inc. ("PSE" or "the Company")?

A: Yes, I am.

Q: What is the purpose of your rebuttal testimony?

A: I discuss an agreement we reached with Commission Staff to modify PSE's proposed expense for winter capacity costs for the 2004 PCORC rate year. I then respond to certain assertions that the parties have made concerning PSE's documentation and management of its fuel supply and costs. Finally, I address one of Mr. Schoenbeck's points concerning the gas price that should be used to determine the Company's power costs for the 2004 PCORC rate year.

I. THE COMPANY IS AGREEABLE TO COMMISSION STAFF'S PROPOSED ADJUSTMENT REGARDING WINTER CAPACITY COSTS, WITH ONE MODIFICATION

Q: Does PSE agree with Commission Staff's proposal for winter capacity costs?

A: Yes, with a relatively minor addition. PSE has examined the costs associated with winter peak planning for the 2004-2005 winter period that falls within the 2004 PCORC rate year. Our knowledge of the Company's extreme winter capacity needs for that period is better now than when the Company made its PCORC filing in October 2003. Additionally, the market price of winter call options has decreased during the last four months.

Under these circumstances and based upon the updated information, PSE agrees to Mr. McIntosh's proposed winter call option expense (as corrected) with the additional cost of energy exchanges, $784,656, included as an expense item.

Q: What are energy exchanges and how does the Company use them?

A: PSE has limited capability under its transmission contract with BPA to bring power from east of the Cascades to serve our load in the Puget Sound region, especially during extreme winter events. We enter into exchange arrangements with other energy providers who have generation closer to our territory, and exchange with them our generation at the Mid C.

Q: What is the basis of the energy exchange expense that the Company proposes?

A: We examined the costs for winter energy exchange for the prior winter period. We estimated that the costs for the upcoming winter would be similar, and propose using that estimate for purposes of this 2004 PCORC proceeding and the 2004 PCORC rate year. The expenses associated with these transactions are not reflected in any other expense item.

Q: What is PSE's revised proposed expense for winter peaking costs?

A: PSE seeks inclusion of $3,017,656 in total winter peaking costs for the 2004 PCORC baseline rate. This figure includes the corrected winter peaking expense of $2,233,000 and $784,656 for exchange transactions. We have discussed this revised expense with Mr. McIntosh, and he is agreeable to the Company's approach and proposal.

II. PSE'S MANAGEMENT OF ITS FUEL SUPPLY AND COSTS

A. Introduction

Q: What is the purpose of this section of your testimony?

A: I rebut assertions that PSE should not be permitted to recover some of the costs associated with the Tenaska and Encogen combined-cycle combustion turbines. My testimony focuses on the time period in which I participated in a risk advisory role in PSE's Risk Management Committee ("RMC") meetings -- from October 2000 through

August 2001 -- and also on the time period since December 2001, when I joined PSE as its Vice President Energy Portfolio Management.

Q: Please state your conclusions.

A: Consistent with Mr. Gaines' rebuttal testimony, I conclude that the Company has acted appropriately with respect to its management of fuel supply for the Tenaska and Encogen plants. As components of its portfolio management strategy, PSE studies and analyzes various factors and information in considering whether to enter into long-term fixed price contracts. The Company's rigorous approach has led to reasonable decisions with regard to fuel management.

B. The Company Provided Substantial Information to the Parties Concerning Its Portfolio Management

Q: Have the parties made assertions regarding PSE's portfolio management?

A: Yes. Mr Elgin has asserted that PSE "has not demonstrated that it managed the fuel supply for [the Tenaska and Encogen] contracts in a manner consistent with its prior state objective to reduce the total cost of power of these contracts." *See* Ex. __ (KLE-1T) at 13 l. 2-4. Similarly, Mr. Schoenbeck has questioned PSE's fuel management for Tenaska. *See* Ex. __ (DWS-1T) at 29.

Q: Has PSE provided responsive information to the parties ?

A: Yes. PSE produced thousands of pages of documents (both hard copies and in electronic files) concerning PSE's portfolio and risk management activities in response to discovery in the 2004 PCORC proceeding and in the PCA compliance filing proceeding (Docket No. UE-031389). For example, in response to ICNU Data Request 5.01 in the 2004 PCORC proceeding (which sought RMC documents from January 1, 1998 through the present), we made available for copying six five-inch thick volumes of materials that total more than 8,000 pages of documents.

I am attaching several of the Company's discovery responses as exhibits to my rebuttal testimony in the 2004 PCORC proceeding. Please refer to the following table:

Exhibit	PSE Response to:	Topic
JMR-12	Staff DR 33 (12/11/03)	PSE's techniques for risk management of its gas supply portfolio
JMR-13	Staff DR 34 (12/11/03)	PSE's algorithms, strategies and tools for optimizing its portfolio
JMR-14	Staff DR 51 (12/17/03)	Analysis of price benefits of long-term gas supply options
JMR-15	Staff DR 58 (12/18/03) (the response to Staff DR 58 contains numerous documents; Ex. JMR-15 only includes documents responsive to Staff DR 58 and originally produced in response to Staff DRs 12 and 13 from the PCA compliance filing proceeding; these documents were originally produced in the PCA proceeding on 10/31/03)	Data and documents re long term gas offers after the Tenaska and Encogen buy outs
JMR-16	ICNU DR 3.15 (12/22/03)	Risk Management Committee materials (Ex. JMR-16 only includes the narrative response to ICNU DR 3.15 and the accompanying December 9, 2003 Fundamental Report Summary)
JMR-17	ICNU DR 4.07 (1/6/04)	Description of KW3000 system
JMR-18	ICNU DR 5.01 (2/6/03)	Additional Risk Management Committee materials (Ex. JMR-18 only includes the narrative response to ICNU DR 5.01)

Q: Do you have general comments regarding the context for the information that PSE provided to the parties?

A: Yes. When reviewing PSE's documentation of its portfolio management activities, the business realities involved in active and ongoing portfolio management need to be considered.

Much of the activity required to manage PSE's portfolio is conducted by PSE's risk management and operations staff 24 hours a day, 7 days a week in a dynamic wholesale market environment. Although PSE documents its transactions for credit risk analysis, portfolio planning, and accounting purposes, it does not typically document the reasons it enters into a particular transaction at a particular time for a particular price. (Transactions that require RMC approval per the Company's Energy Procedures Manual do involve more documentation, *see* **Ex. ___ (JMR-__)** at 8.) Nor does PSE document all of the transactions it considers but rejects.

C. PSE'S Portfolio Management Efforts Including Gas Supply Hedging Activities

Q: Does the Company engage in portfolio management activities?

A: Yes. Mr. Gaines discusses in his rebuttal testimony the Company's risk management efforts and hedging activities related to fuel supply for its gas-fired units through approximately 2001. *See generally* **Ex. ___ (WAG-18T)**. I will review some of the Company's risk management efforts and hedging activities that we have performed since 2001. Documentation of the Company's activities since 2001 can be found in my direct testimony (**Ex. ___ (JMR-1T)**) and in the discovery responses I discussed above.

Q: What specific activities has PSE performed since 2001?

A: Due to the Company's obligation to serve load as well as its heightened sensitivity to market risks (following the Western Power Market Crisis), PSE has sought in recent years to reduce its exposure to spot market uncertainty. To reduce this exposure, PSE is building its understanding of spot price and volumetric uncertainty -- a task that is complicated by PSE's diverse mix of physical assets, long-term contracts, and short-term contracts.

For these reasons, PSE began in 2001 to look for an overall system that could dynamically model the risk components in a load-serving utility's energy portfolio. The Company sought a system that would help it understand the range of potential outcomes in energy costs; develop a base case scenario; and link up the transaction capture and scheduling systems, financial reporting, credit risk management, and risk analysis. In 2002 PSE elected to purchase the KW3000 system -- an integrated deal capture and risk management system that I discuss below. We responded to Staff Data Request 34 in the 2004 PCORC proceeding with detailed information concerning the KW3000 system. *See* **Ex. ___ (JMR-13)**.

Q: Please describe the KW3000 system and its use.

A: The KW3000 system permits PSE to model scenarios of price, hydro, load, and other inputs as required to represent possible future portfolio outcomes. Because the system incorporates all of PSE's contracts, load, resources, and trades, and because it accounts for commodity and volumetric risk, we are able to use the KW3000 system as our primary tool in managing the Company's short-term power portfolio. The KW3000 system is updated several times a week to reflect factors such as plant outages, new hydro energy forecasts, market prices, and other variables.

We use the KW3000 system in several ways to predict possible risk exposure. One approach is to evaluate the downside risks associated with scenarios that will result in

high energy costs. Another approach is to model the current spot exposure associated with having open market positions in the spot market. (I referred to this earlier in my rebuttal testimony as "spot market exposure.")

An important variable in the analysis we conduct (using the KW3000 system) is the price relationship between power and gas prices (commonly called the "spark spread" or "heat rate"). PSE models its generation on a probabilistic basis to determine the expected dispatch rate. To the degree that the economics change between the fuel input price and the power price, the dispatch of the plants will be modified accordingly. The dispatch rate is a very important factor with respect to managing fuel hedges. *See* **Ex. ___ (JMR-13)** (PSE response to Staff Data Request 34).

Q: How does this relate to management of fuel hedges for Tenaska and Encogen?

A: When these units were constructed, it was anticipated that they would operate on a regular basis and would be treated as baseload resources in the Company's portfolio. Over time, however, the price relationship between gas and power – again, the "spark spread" – has narrowed to the point where there are often periods when the plants are displaced. PSE therefore purchases power from third parties in lieu of fully dispatching these units. *See* **Ex. ___ (JMR-14)** and **Ex. ___ (JMR-15)** (PSE responses to Staff Data Requests 51 and 58).

Q: Has PSE engaged in gas hedging activities since 2001?

A: Yes. For the last several years, we have made gas purchase decisions on an aggregated portfolio basis rather than on a facility-specific basis. We have done so because some positions may have natural off-setting risks -- such as gas generation as a hedge for low hydro conditions. Consequently, we test each hedging strategy against the overall portfolio (as opposed to gas purchases for individual turbines). This becomes

important as the resources are dispatched depending upon market conditions, as I discussed above with respect to the Tenaska and Encogen units.

In addition, in early 2003 the Company developed a dollar-cost averaging strategy to reduce exposure in the power portfolio and to help protect against volatility in wholesale markets, such as the volatility that PSE experienced during the 2000-2001 Western Power Market Crisis. One advantage of this strategy is that it reduces the possibility of purchasing commodity at the forward market's highest point (or selling the commodity at its lowest point), which thereby minimizes the deviation between the average of the purchase/sale price and the spot market price at the time of delivery. In applying this strategy, PSE established plans to purchase hedges for specific forward time frames, with the goal of purchasing a defined amount of power and of gas in order to ratably reduce the deficit positions by a small amount each month. *See* **Ex. ___ (JMR-12)** at 3 (PSE response to Staff Data Request 33).

Q: Has PSE considered locking in long-term gas supply contracts during your tenure at the Company?

A: Yes. PSE has periodically considered procuring long-term gas supply for its gas-fired plants at fixed prices. *See* **Ex. ___ (JMR-14)** and **Ex. ___ (JMR-15)** (PSE responses to Staff Data Requests 51 and 58). Although PSE has periodically hedged its gas supply by locking in prices for shorter periods, it has not been able to lock in long-term supply at fixed prices it believes are attractive enough to justify such a step.

Before locking into long-term fixed priced contracts for gas, PSE considers a number of factors, including for example:

- the expected need for long-term fixed price gas given an integrated assessment of PSE power portfolio;

- the level of projected heat rates, for if projected market heat rates are low, then it is less likely that PSE will use all of its gas-fired generation, and hence the need to purchase gas as a generation fuel will drop;
- the reasonableness of the prices for long-term supply versus fundamental analysis of long term price trends and current short term prices;
- the embedded premium of long-term prices compared to current market prices;
- counterparty credit issues, including the other party's credit risk and whether, after the purchase of the long-term contract, PSE will continue to have enough credit to manage its short-term portfolio needs; and
- whether the output of the resource is needed to serve load at a particular time (since PSE does not want to lock in a fixed price if the resource is not needed for that purpose).

Q: What has the Company seen with respect to prices for long-term gas supplies?

A: PSE prepared a price chart in response to a discovery request by Commission Staff in this proceeding. The chart shows that forward prices carried a large premium over short-term prices in the first part of 2002. *See* **Ex. ___ (JMR-14__)** at 4 (PSE response to Staff Data Request 51). As the year progressed, market prices continued to increase to levels that we did not believe warranted locking in long-term prices. In considering these increasing prices as well as the decline in market heat rates, PSE did not believe that it was appropriate to lock in long-term supply contracts for the Tenaska and Encogen units.

Further, long-term forecasts in late 2002 showed prices falling in the 2004-2008 timeframe, rising to less than current levels by 2011. When updated for more conservative assumptions as of August 2003, PSE's analysis of various industry forecasts showed periods of falling prices in 2004-2006, an increase in 2006-2008, and

then a sharp decline from 2008 through 2012. PSE has questioned whether the potential supply constraints that form the basis for the more conservative forecasts of 2003 will materialize. Higher prices may result in increased drilling, and federal energy policy may result in greater opportunity for expanded exploration and production activity. In view of these price forecasts and uncertainties, PSE did not believe it was wise to enter into long-term fixed price agreements that have continued to demand a premium over current and projected spot market prices. *See* **Ex. ___ (EMM-43C)** at 4-10.

III. HOW PSE USES ITS FUNDAMENTAL FORECAST MODEL

Q: What is ICNU's position with respect to the Company's projected gas price?

A: Mr. Schoenbeck focuses on the median price under 100 different price scenarios that the Company simulates. *See* **Ex. ___ (DWS-1T)** at 15 l. 23. Mr. Schoenbeck uses the median price to assert that the Company's projected price for natural gas in the 2004 PCORC proceeding is allegedly too high.

Q: Does the median price support Mr. Schoenbeck's conclusion?

A: No. We do not use the scenarios that the Company simulates -- using the fundamental price forecasting model -- to predict that a single and specific price for natural gas will occur.

Q: Is the median price the Company's best guess for a future price?

A: No. All of the price scenarios have equal weight, and hence they all may be possible outcomes. The median scenario is simply the mid-point among all of the 100 scenarios -- not a forecast outcome.

Q: Please describe how PSE simulates the price scenarios.

A: In our fundamental price forecasting model, we simulate 100 different price scenarios using a range of gas and electric prices, hydro energy assumptions, oil pricing, GDP growth, gas statistics, and temperature scenarios. PSE then centers the distribution of prices (generated from the scenarios in the fundamental price forecasting model) around the current forward price curve. The range of prices around the forward price curve is used in a separate set of 100 scenario runs in the KW3000 system, to develop the position and risk analysis of the Company's portfolio. *See* **Ex. ___ (JMR-13)** at 1 (PSE response to Staff Data Request 34); **Ex. ___ (JMR-17)** (PSE response to ICNU Data Request 4.07).

Q: Does this conclude your rebuttal testimony?

A: Yes, it does.