EXHIBIT NO. ___(RCR-1T)
DOCKET NO. UE-11___/UG-11___
2011 PSE GENERAL RATE CASE
WITNESS: R. CLAY RIDING

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.,** **Respondent.**	**Docket No. UE-11____** **Docket No. UG-11____**

PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
R. CLAY RIDING
ON BEHALF OF PUGET SOUND ENERGY, INC.

JUNE 13, 2011

PUGET SOUND ENERGY, INC.

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CONTENTS

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Clay Riding, and my business address is 10885 N.E. Fourth Street, Bellevue, Washington 98004. I am employed by Puget Sound Energy, Inc. ("PSE" or "the Company") as Director, Natural Gas Resources.

Q. Have you prepared an exhibit describing your education, relevant employment experience, and other professional qualifications?

A. Yes, I have. It is Exhibit No. ___(RCR-2).

Q. What is the purpose of your testimony?

A. My testimony addresses several issues related to natural gas supply, transportation and storage. First, I provide an overview of the region's natural gas system and the Company's access to supply basins. Then, I address recent transactions between PSE and: (i) BNP Paribas Energy Trading Canada Corp. ("BNP"), which provides PSE with additional natural gas transportation capacity on Spectra Energy's Westcoast Energy BC Pipeline ("Westcoast") system; and (ii) Occidental Energy Marketing, Inc. ("Occidental"), which provides PSE with additional natural gas transportation capacity on Northwest Pipeline GP's ("NWP") system from the Stanfield, Oregon interconnection with TransCanada's Gas Transmission Northwest ("GTN") system. I also address the assignment of Jackson Prairie capacity from the core gas book to the power book. Further, I discuss the pricing assumptions with respect to Stanfield gas supplies. Finally, I discuss the current market forces and economics affecting PSE's natural gas resource choices.

II. OVERVIEW OF THE REGION'S NATURAL GAS SYSTEM AND PSE'S NATURAL GAS RESOURCES

Q. Please provide an overview of the region's natural gas system.

A. Pacific Northwest natural gas markets are served by three pipeline companies: NWP, GTN and Westcoast. Upstream of these pipelines are various other pipelines (e.g., TransCanada's Foothills ("Foothills") and Alberta ("NGTL") systems and soon, Ruby Pipeline ("Ruby") currently under construction by a division of El Paso Natural Gas), gathering systems and processing plants that facilitate delivery of gas to markets.

Additionally, the Pacific Northwest has two underground storage facilities—Jackson Prairie and Mist—and several LNG peaking facilities. Please see Exhibit No. ___(RCR-3) for a schematic of the region's natural gas infrastructure.

These pipelines provide Pacific Northwest markets with access to supplies produced in the Rocky Mountains and the Western Canadian Sedimentary Basin (in both Alberta and British Columbia), and access to supply-area underground storage facilities (Clay Basin in Utah, AECO in Alberta and Aitken Creek in British Columbia).

Q. Please describe PSE's natural gas transportation and storage resources.

A. PSE has entered into various firm transportation and storage service contracts that allow PSE to serve its firm customers under winter, peak-day conditions, and to provide reliable natural gas supply for its gas-fired power generating facilities. PSE has access to all three supply basins (Rockies, Alberta and British Columbia) through resources it has acquired for the core gas book, and access to British Columbia supply basins and the Stanfield market hub on GTN through resources it has acquired for the power book. The Stanfield market hub provides access to Alberta supplies and, beginning in mid-2011, will provide access to Rockies supplies through the new Ruby pipeline. The power book has held pipeline capacity that accesses Rockies supply through a non-renewable, third-party contract that expires on June 30, 2011. Additional Rockies pipeline capacity is generally not available.

PSE acquires sufficient firm natural gas resources to meet projected peak-day requirements for both the gas and power portfolios, taking into account on-system peaking and alternative fuel resources. Except for two small peak-shaving facilities (the Swarr propane-air and Gig Harbor LNG facilities), deliveries to all of PSE's core gas markets require NWP transportation services, as do all but two gas-fired generating facilities (Whitehorn and Sumas). However, three gas-fired generating sites (Whitehorn, Fredonia and Frederickson) can burn fuel oil and have fuel oil on-site, so firm pipeline capacity is not required for those sites; instead, they rely on non-firm transportation arrangements purchased from the core gas book at market sensitive rates or from other parties, including NWP.

Q. Please describe the Jackson Prairie storage service assignment from PSE's core gas book to PSE's power book.

A. PSE has assigned 50 million decatherms ("MDth") per day of storage deliverability and 500,000 MDth of storage capacity to the power book from April 1, 2011 through March 31, 2012. The power book purchased the capacity for operational reliability and supply management, and retains all rights associated with the service, with no restrictions beyond those governing PSE's storage operations (fill requirements, withdrawal decline curve, etc.). The power book may use the storage service for any purpose, including balancing load, meeting peak-day requirements, or intra-day dispatching.

The power book is paying the core gas book $68,900 per month during the term of this assignment, which is a market-based value calculated using the same methodology PSE uses to value storage services (either purchases or sales) in the Pacific Northwest market. The assignment is determined on a year-to-year basis based on the needs of the core gas book. Based on current load growth projections in the core gas book, PSE currently expects the assignment to continue for one or two years beyond the existing assignment term. If the storage service assignment is extended beyond the current term, it will be at the then-current market value.

Q. What are the projected peak-day demand requirements for the core gas book and power book?

A. Projected peak-day demand for the core gas book requires NWP deliveries of approximately 940 MDth per day for the 2011-2012 heating season. The power book requires peak-day, natural gas deliveries of approximately 159 MDth per day for its current combined-cycle combustion turbine ("CT") fleet that is served through NWP, including duct-fired generation. As noted above, PSE's simple-cycle CTs can operate on fuel oil and adequate oil storage is maintained on-site to meet peak-day load requirements; however, if all of PSE generating facilities are operating on natural gas, the generating facilities served through NWP can consume as much as 290 MDth per day. In addition, PSE generating facilities that have direct access to Westcoast, and do not require NWP service, can consume as much as 71 MDth per day.

Q. What is PSE's peak-day firm delivery capability for the core gas book and power book?

A. The table below reflects PSE's peak-day firm delivery capability as of May 1, 2012 based on its current NWP-based transportation capacity holdings from all three supply basins and market-area storage facilities:

NWP Pipeline Capacity From All Sources	**May 2012 Capacity (MDth/day)***					
Gas Source and Route	**Core Gas Book**		**Power Book**		**Total**	
British Columbia	260	25%	139	83%	399	33%
Alberta	76	7%	-	-	76	6%
Stanfield	-	-	29	17%	29	2%
U.S. Rockies	184	18%	-	-	184	15%
Jackson Prairie	457	43%	-	-	457	38%
Plymouth LNG	70	7%	-	-	70	6%
Total Pipeline Delivery Capability	**1,047**		**168**		**1,215**	
*MDth is equal to 1,000 MMBtu						

In addition to the capacities on NWP detailed above, PSE holds the following pipeline transportation resources on certain upstream pipelines:

Upstream Pipeline	Core Gas Book	Power Book	Totals
	(MDth/day)*	(MDth/day)*	(MDth/day)*
Westcoast	130	73	203
NGTL	80		80
Foothills	79		79
GTN	90		90
*MDth is equal to 1,000 MMBtu			

The core gas book resources reflected in the preceding tables are held under long-term contracts that contain rights-of-first refusal. Much of the power book resources (89 MDth per day) are similarly held, while 29 MDth per day is held under a long-term temporary assignment and the remaining 50 MDth per day is currently held under short-term temporary assignments that will be extended until permanent solutions commence. Such mid-term arrangements were made to provide a bridge to permanent solutions. As explained later in my testimony, PSE has secured 50 MDth per day of permanent capacity to replace the short-term temporary contracts, effective November 1, 2014.

III. RECENT TRANSACTIONS

Q. Please describe the Company's strategy for supplying its requirements at Sumas.

A. PSE has supply requirements related to firm NWP transportation capacity of approximately 260 MDth per day at Sumas for the core gas book and 139 MDth per day for the power book. In addition, the power book has additional demand of 26 MDth per day at Sumas to supply the Sumas Generating Station. The power book also has Sumas-sourced, non-firm, simple-cycle CT demands approaching 175 MDth per day. PSE's long-term strategy is to supply approximately 50 percent of the firm Sumas requirements from Northern British Columbia supply areas at Station 2 via Westcoast T-South pipeline capacity. PSE has been successful in procuring some of this Westcoast capacity at a discount to maximum tariff rates.

Q. Please explain the transaction PSE entered into with BNP.

A. PSE took permanent assignment of approximately 26 MDth per day of Westcoast T-South pipeline capacity from April 1, 2010 through October 2018 from BNP, and BNP made a lump-sum payment to PSE to effect the discount.

PSE procured this capacity for the power book to work towards the 50 percent Northern British Columbia supply strategy. With the acquisition, the power book's ratio stands at 44 percent (Westcoast pipeline capacity compared to firm NWP Sumas capacity plus Sumas Generating Station) and the core gas book ratio is 50 percent.

Q. Please explain the transactions PSE entered into with Occidental.

A. In order to diversify its portfolio of supply sources, especially for the power book, PSE had been considering acquisition of capacity from numerous proposed pipelines, which would provide access to incremental Rockies or Alberta supply. Ultimately, NWP's Blue Bridge proposal, utilizing the proposed Palomar pipeline, emerged as the last remaining viable candidate. However, insufficient market demand for either project has indefinitely postponed both projects.

Nevertheless, PSE continued to see value in the diversity benefits of incremental supply from other supply basins. Ruby, which will extend from the Rockies to Malin, OR, will be capable of introducing up to 1.5 Bcf per day of incremental Rockies production into the region beginning in the third quarter of 2011. PSE was aware that Occidental held a substantial quantity of firm NWP pipeline capacity from the Stanfield, OR interconnect with GTN to Western Washington – functionally the same access and route of the proposed Blue Bridge/Palomar project – and entered into discussions. As a result, PSE was able to acquire two blocks of firm pipeline capacity from Occidental through capacity release transactions.

The first capacity release contract consists of approximately 29 MDth per day from Stanfield to Deer Island, Jackson Prairie, and Bellingham; the release commenced April 1, 2011 and terminates, without renewal rights, on March 31, 2025. The rate on this capacity is NWP's standard vintage pipeline rate and is significantly lower than the expected rate of the proposed Blue Bridge/Palomar rate. The contract can provide firm service to the Goldendale, Mint Farm, Freddy 1 and Encogen plants.

The second capacity release contract is for 50 MDth per day commencing November 1, 2014 and terminating without renewal rights on March 31, 2025. This second contract provides firm service from Stanfield to SIPI (SIPI is the interconnect between NWP and FortisBC north of Bellingham), or effectively, any points in between, including all PSE generating facilities served off of NWP. (PSE has subsequently secured permanent rights to the 50 MDth per day Stanfield to SIPI firm capacity through a ten-year, renewable contract directly with NWP, commencing at the expiration of the second Occidental release.) This contract is also priced at the NWP vintage firm rate and provides substantial savings over the proposed new pipeline projects.

The first contract replaces a non-renewable contract with Occidental that expires in June 2011 which provided firm service from Sumas (7 MDth per day) and Rockies (17 MDth per day). The second contract will replace temporary capacity release contracts that provide firm service from Sumas. Both of these contracts will facilitate access to Rockies gas from the Malin terminus of Ruby or from Alberta through the facilities of GTN. PSE has been approached by several shippers holding rights on Ruby to discuss the potential of long-term supply agreements at Stanfield.

As a result of these acquisitions, from mid-2011 through November 2014, PSE's power book portfolio will be diversified to a mix of 83 percent British Columbia / 17 percent Alberta or Rockies; and for the period of November 2014 through

March 2025, the power book portfolio will be a 53 percent British Columbia / 47 percent Alberta or Rockies mix.

IV. SUPPLY PRICING ASSUMPTIONS

Q. Please explain how the Stanfield source of supply should be priced for rate making purposes.

A. The introduction of Rockies supplies via Ruby will have a significant impact on market dynamics on the GTN system. Ruby will be capable of delivering approximately 1,500 MDth per day to Malin (1,000 MDth per day of which is under long-term firm contracts) without any increase in southbound capacity into California. The Ruby supply will certainly take the place of a significant portion of Alberta gas that has been serving the Malin market for the past 50 years. PSE expects Alberta gas to be readily available at Stanfield; in addition, as mentioned above, several Ruby shippers have expressed an interest in delivering gas to Stanfield as well. Finally, the development of substantial shale supplies in the Eastern U.S. will displace Western Canadian supplies, increasing the supplies available to serve the Western U.S. markets. Until a robust, liquid market develops at Stanfield, PSE expects Stanfield supply pricing to be based on an AECO related index.

For ratemaking purposes, gas and power prices must be forward looking to reflect current market conditions; and that is how gas purchases at Stanfield should be priced. Supplier quotes and forecasting estimates based on forward market prices provide the most reasonable basis for commodity pricing.

V. MARKET FORCES AFFECTING GAS SUPPLY

Q. Please describe the market forces affecting natural gas supply.

A. Conventional natural gas supplies in North America have been in decline over the last several years and are projected to continue to decline; the only region with significant conventional gas growth projections is the U.S. Rockies. Given the state of decline, many experts, just three years ago, were predicting that LNG imports would be required to replace declining production as well as serve growing demand, including the burgeoning gas-fired power generation market. Several LNG import facilities were built. In 2007 and 2008, natural gas prices increased dramatically on the global market, as LNG prices followed skyrocketing oil prices. Those high prices had a tremendous effect on the North American gas market as well. First, high international prices dramatically cut LNG imports into the U.S. as suppliers chased higher value markets. Second, the high prices and the U.S. recession tempered demand across all sectors. However, high cash prices and promise of high future prices enticed producers to increase exploration and development expenditures dramatically, and enabled development of unconventional fields and formations that were previously thought to be uneconomic.

Resulting discoveries and developments have radically changed the North American natural gas supply landscape. Technology and efficiency advances enabled producers to successfully develop unconventional production such as shale and tight sand formations and increased recoverable reserve projections dramatically. In recent years, unconventional production made up less than 40 percent of North American production; by 2020, it is projected that unconventional production will make up 75 percent of total North American production, with most of that growth in shale formations. Total North American production is expected to grow from current production levels of 50 billion cubic feet ("Bcf") per day to 60 Bcf per day by 2020. The most prolific U.S. shale plays are in Texas, Louisiana and, most interestingly, in the Appalachian states of Pennsylvania and West Virginia. Significant production in those eastern states may have a profound impact on the North American gas market by reducing the demand for Canadian gas in eastern markets, and possibly increasing the availability of supplies from Western Canada for Western U.S. markets.

Promising Canadian shale plays, primarily in Northeast British Columbia are also under development; and over the past 24 months, development and production cost projections have been reduced to the point that Canadian shale is competitive with many shale basins in the U.S. Current projections indicate that Canadian shale will more than offset the decline in conventional production. Some large Canadian gas producers are concerned about having sufficient market for the new supplies. In fact, three producers are so concerned that they purchased interests in the Kitimat LNG export terminal that is under development. Recently, plans for development of at least two additional LNG export terminals in British Columbia have been announced.

Global LNG supplies are expected to increase substantially in coming years which may lead to near-term supply surpluses; however, LNG is generally expected to play a minor role in the North American supply picture. North American markets will be able to take advantage of surplus LNG supplies due to the continent's tremendous storage capacity, which is much greater than any other continent. However, baseload deliveries into North America are less likely.

Q. How will growing demand in the Pacific Northwest be served?

A. Eventually, Pacific Northwest growth will require new and/or expanded pipeline projects to access supplies from the U.S. Rockies and/or British Columbia.

As discussed earlier, there is strong natural gas supply growth throughout North America. Natural gas supplies are readily available, but pipeline capacity must eventually be built to accommodate continued Pacific Northwest growth, especially in the natural gas-fired power generation sector. The existing infrastructure meets current regional requirements, but data compiled by the Northwest Gas Association suggests that design-day Pacific Northwest demand is approaching system capacity.

Q. Does PSE expect to obtain additional pipeline capacity from Canada or the Rockies?

A. Yes, eventually that will be necessary. As noted above, PSE is projecting a capacity shortfall in the core gas book in 2017, and the power book will need to add capacity as it adds generating plants that do not have alternate fuel, or as overall power generation requirements grow to the point that interruptible or short-term firm capacity is not deemed to be sufficiently reliable.

PSE has several options available that will provide the Company additional pipeline capacity. PSE's preferred strategy is to maintain a balanced U.S.-Canadian supply basin portfolio. As discussed above, the new Ruby pipeline will help the region become more balanced with the introduction of up to 1.5 MDth per day of gas supplies into the region. (Ruby is expected to commence operations in the third quarter of 2011). However, sufficient regional market interest will be necessary to facilitate development of a cross-Cascades pipeline that will allow access to those additional Rockies supplies. At this juncture such regional interest has not materialized. PSE will look to take advantage of existing capacity that becomes available to meet projected load, recognizing that oftentimes PSE must react to opportunities when they present themselves, even if such acquisitions are made in advance of needs. PSE will also continue to participate in discussions regarding the development of new regional infrastructure.

Q. Is PSE considering a pipeline capacity expansion from British Columbia?

A. PSE has explored expansion from British Columbia. Such an expansion may be less complicated than a Rockies pipeline because it could accommodate a smaller project and would largely be accomplished through additional compression (i.e., it would require very little additional pipe). Given the smaller project size, PSE would not need other subscribers and could arrange for an NWP expansion from British Columbia, if a cross-Cascades project proves unfeasible.

Although expansion from British Columbia will be less expensive when viewed solely through the lens of fixed costs, the region would be increasingly subject to Canadian market conditions. As mentioned previously, Northern British Columbia shale development looks promising, but it is unclear where producers will prefer to market their gas (Kitimat LNG, AECO, Chicago, East Coast, etc.).

VI. CONCLUSION

Q. Does this conclude your direct testimony?

A. Yes, it does.