EXHIBIT NO. ___(RG-1HCT)
DOCKET NO. UE-06___/UG-06___
2006 PSE GENERAL RATE CASE
WITNESS: ROGER GARRATT

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.,** **Respondent.**	**Docket No. UE-06____** **Docket No. UG-06____**

PREFILED DIRECT TESTIMONY (HIGHLY CONFIDENTIAL) OF ROGER GARRATT ON BEHALF OF PUGET SOUND ENERGY, INC.

REDACTED VERSION

FEBRUARY 15, 2006

PUGET SOUND ENERGY, INC.

PREFILED DIRECT TESTIMONY (HIGHLY CONFIDENTIAL) OF W. ROGER GARRATT

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PUGET SOUND ENERGY, INC.

PREFILED DIRECT TESTIMONY (HIGHLY CONFIDENTIAL) OF W. JAMES ELSEA

I. INTRODUCTION

Q. Please state your name, business address, and position with Puget Sound Energy, Inc.

A. My name is Roger Garratt. My business address is 10885 N.E. Fourth Street Bellevue, WA 98004. I am the Director of Resource Acquisition within the Energy Resource Group for Puget Sound Energy, Inc. ("PSE" or "the Company").

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

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

Q. What are your duties as Director of Resource Acquisition within the Energy Resource Group for PSE?

A. My responsibilities include oversight of: (i) the acquisition of electric resources for the Company, commencing with the Request for Proposal process and culminating in the execution and closing of all of the agreements necessary to acquire a resource; and (ii) the construction and operation of the Company's wind projects.

Q. What is the nature of your testimony in this proceeding?

A. My testimony in this case picks up where I left off in PSE's 2005 Power Cost Only Rate Case, Docket Number UE-050870 (the "2005 PCORC"). In that case, I described the Company's evaluation of the various resource alternatives that were proposed in response to its 2004 Requests for Proposals ("RFP") process to meet the Company's need for additional power resources. Rather than repeat those details in my prefiled direct testimony in this case, I have provided them as Exhibit No. ___(RG-6HC) to my testimony, as updated by specific information related to the Wild Horse Project. An executive summary of the 2004 RFP Process is set forth in the prefiled direct testimony of Mr. Eric Markell in this case, Exhibit No. __(EMM-1HCT).

My testimony in this case focuses instead on the additional due diligence, negotiations and evaluation that the Company undertook prior to entering into the final agreements to acquire the Wild Horse wind powered electric generation facility (the "Wild Horse Project") and the 20-year purchased power agreement with ORMAT ("ORMAT PPA"). I discuss these projects in greater detail than Mr. Markell's executive summary in his testimony, Exhibit No. ___(EMM-1HCT). The Wild Horse Project and the ORMAT PPA were the next most attractive resource alternatives to emerge from the Company's 2004 RFP Process and finalization of these contracts completed the Company's pursuit of the prospects that made the Stage 2 short list in the 2004 RFP Process.

I also provide additional details regarding the costs and construction schedule for the Wild Horse Project, which is expected to begin commercial operation by the end of December 2006.

Finally, I provide an update of the status and costs of the Hopkins Ridge Project that the Commission approved in the 2005 PCORC.

II. THE WILD HORSE PROJECT

A. Additional Due Diligence

Q. Did PSE conduct any additional due diligence with respect to the Wild Horse Project after Stage 2 of the 2004 RFP Process?

A. Yes. The Company conducted an extensive review of environmental and real estate matters related to the Project. The Company also further investigated the wind turbine supplier and technology proposed to be used for the Project. Finally, although the Company had already investigated the capabilities of the developer, it made arrangements for ongoing review of technical matters associated with Horizon's construction of the Project. *See generally* Exhibit No. ___(EMM-14HC).

Q. What environmental review did the Company conduct?

A. The environmental due diligence consisted of review by PSE staff and its agents of all required documentation to support the Washington State Energy Facility

Site Evaluation Council ("EFSEC") site certification process, and all other local, state and federal government notices, authorizations, approvals, licenses, and permits required for construction and operation of the Project, and corresponding applications, notices, studies and other information, as provided by the developer.

The major documents reviewed included Horizon's initial response to PSE's 2004 RFP and subsequent information provided as requested, the EFSEC Application for Site Certification, the EFSEC Draft and Final SEPA Environmental Impact Statements (including underlying studies and analysis), the Kittitas County Development Activities Application, Draft and Final Kittitas County Development Agreement, and Draft and Final EFSEC Site Certification Agreement.

Q. What real estate matters did the Company investigate?

A. The real estate due diligence included title review and a survey of the entire site to confirm the site is contiguous, without significant encroachments, and that there were not any additional real property interests needed for the Project.

Q. What real property interests are associated with the Wild Horse Project?

A. The Wild Horse Project occupies 9,240 acres of rural, vacant land that were owned by private landowners and two government agencies at the time PSE analyzed the Project proposal. As part of the closing of the transaction, PSE purchased approximately 5,320 acres, leased 2,560 acres from the Washington State Department of Natural Resources and leased approximately 80 acres from the Washington State Department of Fish and Wildlife. Additionally, the Company purchased approximately 1,280 acres to provide access to the Project site. The Company also obtained five easements to accommodate the interconnecting transmission line running from the Project site to the point of interconnection with the PSE system.

Q. Did the Company include these land acquisition costs in its analyses of the costs and benefits of wind projects?

A. Yes.

Q. How did the Company investigate issues related to the proposed wind turbines?

A. A consultant retained by PSE, Garrad Hassan, provided a due diligence review of the Vestas V80, the wind turbine generator that has been selected for the Project, and of Vestas itself. Garrad Hassan confirmed that Vestas is the world's leader in wind turbine market share and is considered the leader in technology as well. The

V80 wind turbine has earned a "Type Certificate" from Germanischer Lloyd ("GL"), an industry recognized certification agency. The V80 fleet has achieved over 97% availability, and thus Garrad Hassan concluded PSE should expect to achieve its operational and financial goals with this wind turbine.

Nevertheless, Garrad Hassan also recommended that PSE take advantage of the five-year warranty offered by Vestas as protection against any serial defects which might show up after the expiration of the standard two-year warranty. PSE implemented that recommendation by entering into the five-year warranty agreement described later in my testimony.

In addition to the Garrad Hassan due diligence, PSE also inspected the Vestas factories, including the machine shops that manufacture major components, the nacelle[1] assembly factory, and the blade production factory.

Q. What arrangements did the Company make for ongoing due diligence with respect to Project development?

A. For the construction period, PSE retained Global Energy Concepts, an internationally recognized wind energy firm headquartered in Kirkland, WA to assist with certain technical issues during the course of the construction and testing period. PSE will consult with experienced engineers and technical

[1] The nacelle is the structure on top of the tower which houses all of the generating components.

advisors to assist with issues that require specific wind energy industry expertise, including foundation design and installation and commissioning of the wind turbines.

In addition, PSE staff engineers reviewed, negotiated and accepted the technical specifications included in the engineering, procurement and construction contract, in particular the electrical design specifications for the transformers, substations, overhead transmission lines, and underground collection systems.

B. Additional Cost Analyses

Q. Did the Company update its analysis of the projected costs of the Wild Horse Project subsequent to its Stage 2 analysis for the 2004 RFP process?

A. Yes. Because the due diligence and contract finalization stage of the 2004 RFP process extended for a number of months after the conclusion of the Stage 2 RFP analysis, the Company again updated its forward gas prices, AURORA model and the Portfolio Screening Model as part of its continued consideration of the Wild Horse Project. As described in Mr. Elsea's testimony, the Wild Horse wind resource, along with the Hopkins Ridge wind resource, continued to demonstrate great benefit to the Company's power portfolio. The Wild Horse Project's projected 20-year levelized cost of approximately $[redacted]/MWh and net present value benefit to PSE's electric portfolio, ranging from $54 to $67 million continued to make it the next most attractive option after the Hopkins Ridge Project.

Q. Why are the projected 20-year levelized costs of the Wild Horse Project higher than the projected 20-year levelized costs of the Hopkins Ridge Project?

A. The higher costs are due in part to slightly less favorable wind characteristics at Wild Horse: [redacted]% capacity factor for the Wild Horse Project versus [redacted]% for Hopkins Ridge. This is largely due to the higher elevation at Wild Horse, since wind energy is related to air density, which is a function of altitude.

The higher costs are also due to price increases in the wind industry as a whole after the terms of the Hopkins Ridge Project were finalized, particularly with respect to wind turbine pricing and pricing for operations and maintenance.

Q. How could industry price increases impact a proposal that had already been submitted into the 2004 RFP?

A. No respondent to the Company's 2004 RFP, whether proposing a new or an existing project or a power purchase agreement, provided a "hard money" fixed-price offer with a guaranteed project schedule. The nature of the competitive solicitation process is that non-binding proposals from respondents are constantly subject to change and that evaluations and negotiations occur in the midst of a dynamic market.

Q. What happened in the industry to raise the Wild Horse Project price?

A. A primary factor driving the higher price for the Wild Horse Project was considerable tightening of the global and U.S. wind turbine market during 2005, after the pricing for the Hopkins Ridge Project transaction was finalized. After the expiration of the production tax credit on December 31, 2003, the price of wind turbines fell dramatically in the U.S. market throughout 2004. Until the production tax credit was renewed in October of that year,[2] the turbine suppliers effectively could not sell turbines in the U.S. market.

Renewable Energy Systems ("RES"), the developer of the Hopkins Ridge Project, took advantage of this situation by quickly entering into its binding letter of intent with Vestas shortly after Congress renewed the production tax credit and before the turbine supply was exhausted and prices rebounded. PSE negotiated in the Hopkins Ridge transaction for the transfer of those economic benefits to PSE, which is why the Hopkins Ridge Project has such a low 20-year levelized cost.

Manufacturers used the leverage caused by increased U.S. demand following renewal of the production tax credit to raise their prices significantly, and the price and terms of the Vestas agreements for the Wild Horse Project reflect those price increases.

[2] The production tax credit was renewed until December 31, 2005, and in the summer of 2005 was subsequently extended until December 31, 2007.

At the same time that the market was changing, the fundamental cost structure of the wind turbine industry was under severe pressure. Most turbines are manufactured in Europe (including the GE wind turbines). As a result, turbine pricing, if quoted in U.S. dollars, subjects the supplier to currency risks. Up until 2005, the wind turbine suppliers assumed these risks. In early 2005, the weakening U.S. dollar meant downward margins for the turbine suppliers for fixed dollar-denominated contracts. Further, the price of steel, oil (a significant component of the wind turbine transportation costs), and other commodities rose significantly in the latter part of 2004. As a result of these pressures, plus a worldwide shortage of wind turbines, all wind turbine manufacturers, including Vestas, began to demand and receive higher prices for their wind turbines.

Q. In addition to higher capital costs, are the projected operations and maintenance costs for the Wild Horse Project wind turbines higher than those costs for the Hopkins Ridge Project?

A. Yes, they are. For both the Hopkins Ridge Project and the Wild Horse Project, Vestas agreed to provide five years of operations and maintenance of the wind turbines. The operations and maintenance cost for Wild Horse is $[redacted] per wind turbine per year (in 2006 dollars), whereas the Hopkins Ridge project cost is $[redacted] per wind turbine (in 2005 dollars). Subsequent to the Hopkins Ridge agreement, Vestas concluded that the Hopkins Ridge price did not allow it to achieve a sustainable operations and maintenance business. Vestas was very firm on this point in negotiations for Wild Horse.

Q. Did PSE re-evaluate whether to purchase the wind turbines from Vestas, given these cost increases?

A. Yes. Horizon and PSE sampled the market once again in April 2005 with a competitive bid among GE, Siemens, and Vestas. The Siemens turbine was the lowest price by a relatively small amount; however, Siemens could not commit to supplying the needed turbines and the proposed turbine was a new model with limited operating history. GE came in with the highest bid. As a result, PSE and Horizon committed to the Vestas V80.

Q. Did PSE take steps to mitigate these cost increases?

A. Yes. Although PSE was unable to obtain the same prices for the Wild Horse Project agreements as for Hopkins Ridge, PSE negotiated improvements to Vestas' Wild Horse proposals, including warranty specifications for serial defects in spite of initial resistance from Vestas. Additionally, while the price of the warranty and service rose for Wild Horse compared to Hopkins Ridge, PSE secured an early termination right in the service agreement for Wild Horse, should the Company find through experience with Hopkins Ridge or Wild Horse that the wind turbines may be maintained for substantially less or should PSE seek to have the operations and maintenance performed by another party. PSE was also successful in negotiating away numerous warranty exclusions initially proposed by Vestas.

In sum, while due to the "seller's market" that existed PSE was not able to extract substantial pricing concessions from Vestas, PSE was able to shift a significant amount of risk to Vestas that, while not definitively quantifiable, nonetheless reflected important economic concessions.

Q. Did PSE consider whether it should continue forward with the Wild Horse Project acquisition at all in light of these cost increases?

A. Yes. During PSE's pursuit of the Wild Horse Project and other 2004 RFP final candidates, PSE continued to meet with developers and to accept and evaluate proposals for other projects and power purchase agreement. PSE considered six other potential wind projects, five of which had originally been proposed in the 2004 RFP process and had further advanced since that time with respect to permitting or other matters that caused them not to advance to PSE's RFP short list during PSE's RFP evaluation process. PSE also investigated a number of potential resource opportunities other than wind.

Q. What were the Company's conclusions with respect to the potential alternative wind projects?

A. PSE concluded that none of the potential alternative wind projects were equal or superior to the Wild Horse Project. No other projects had a firm turbine price commitment or delivery schedule, none had placed turbine deposits to secure a place in the manufacturing queue, and serious negotiations had not yet begun with

key suppliers or contractors. This meant that true costs for each project were likely to increase even further. Furthermore, these uncertainties raised serious concerns that none of the projects could be completed in time to take advantage of the renewed production tax credit, which expires December 31, 2007.

Q. What non-wind alternatives did the Company consider?

A. PSE looked at a number of potential non-wind opportunities including natural gas-fired projects, wood-fired biomass cogeneration projects, short-term power purchase agreements and long-lead time coal generation and hydro projects. PSE pursued several potential options, some of which continue to be pursued to date. However, none of these alternatives was sufficiently attractive to displace the Wild Horse Project. The Wild Horse Project remained among the lowest in evaluated cost of all proposals and was the best among all alternatives available to PSE at the time of its decision to acquire the Project.

C. Board Approval of the Acquisition

Q. Was PSE able to finalize contracts for acquisition of the Wild Horse Project?

A. Yes. As described in Mr. Markell's testimony, negotiations with Horizon and Vestas produced definitive agreements for PSE's acquisition of the Project. At the September 13, 2005 meeting of PSE's Board of Directors, PSE management recommended that the Board approve the acquisition as set forth in the summary documentation to the Board of Directors. The Board approved the

recommendation, and PSE executed the necessary agreements and completed the transaction on September 30, 2005. *See* Exhibit No. ___(EMM-15HC) at 2-5; Exhibit No. ___(EMM-16HC).

D. Project Acquisition Costs

Q. Please describe the acquisition costs for the Wild Horse Project.

A. The Company anticipates an "all in" capital cost of approximately $383 million for the Wild Horse Project acquisition. A detailed breakdown of these capital costs that together represent the "all in" cost of the Wild Horse Project is provided in my Exhibit No. ___(RG-3HC). Exhibit No. ____(RG-3HC) also includes a column showing amounts that PSE had already paid for each type of cost as of December 31, 2005. The following table summarizes these costs and payments:

WILD HORSE WIND PROJECT	Project Budget	Actual as of 12/31/2005	Forecast at Completion
TOTAL PROJECT CAPITAL COSTS	383,253,789	62,753,935	383,253,481
PSE Development Costs	XXXXXXXX	XXXXXXXX	XXXXXXXX
Transaction Costs	XXXXXXXX	XXXXXXXX	XXXXXXXX
Development Assets Purchase & Closing Costs	XXXXXXXX	XXXXXXXX	XXXXXXXX
Real Estate Purchase and Land Leases	XXXXXXXX	XXXXXXXX	XXXXXXXX
Insurance	XXXXXXXX	XXXXXXXX	XXXXXXXX
Owner's Engineer	XXXXXXXX	XXXXXXXX	XXXXXXXX
PSE Construction Management	XXXXXXXX	XXXXXXXX	XXXXXXXX
Turbine Supply & Installation Agreement	XXXXXXXX	XXXXXXXX	XXXXXXXX
Balance of Plant (BOP) EPC Agreement	XXXXXXXX	XXXXXXXX	XXXXXXXX
Transmission Interconnection	XXXXXXXX	XXXXXXXX	XXXXXXXX
Start-Up	XXXXXXXX	XXXXXXXX	XXXXXXXX
Taxes	XXXXXXXX	XXXXXXXX	XXXXXXXX
Contingency	XXXXXXXX	XXXXXXXX	XXXXXXXX
AFUDC	XXXXXXXX	XXXXXXXX	XXXXXXXX

Q. Please describe the type of costs included in the category "PSE Development Costs."

A. The category "PSE Development Costs" consists of internal PSE costs for PSE personnel from throughout the Company who have worked on the Project during its development phase.

Q. Please describe the category "Transaction Costs."

A. The category "Transaction Costs" consists of legal fees paid to the law firm LeBoeuf, Lamb Greene & McRae, L.L.P. for negotiating, drafting and documenting the definitive agreements for the Project, less the $[redacted] Horizon

agreed to reimburse PSE to defray these expenses pursuant to the negotiations described in Mr. Markell's testimony.

Q. What costs are included under the category "Development Assets Purchase and Closing Costs"?

A. The category "Development Assets Purchase and Closing Costs" consists of the costs associated with the purchase of the assets related to the Wild Horse Project under the Membership Interest Purchase Agreement described in Mr. Markell's testimony. The cost of title insurance protecting PSE was borne by Horizon, including the cost of reinsurance for all title insurance amounts greater that $100 million.

Q. What costs are included within "Real Estate Purchase and Land Leases"?

A. The category "Real Estate Purchase and Land Leases" consists of payments made by PSE to purchase approximately 6,600 acres of private land, the lease payments for use of public land and payments to landowners during the pre-construction and construction phase of the Project.

Q. Please describe the category "Insurance."

A. The category "Insurance" consists of the following costs: (i) builder's all-risk insurance and (ii) general liability insurance.

Q. Please describe the category "Owner's Engineer."

A. The category "Owner's Engineer" consists of fees paid by PSE to engineers and other technical consultants to assist with engineering review of the Wild Horse Project during its construction, as described above.

Q. Please describe the category "PSE Construction Management."

A. The category "PSE Development Costs" consists of internal PSE costs for PSE personnel from throughout the Company who have or will work on the Project during the construction phase.

Q. Please describe the category "Turbine Supply and Installation Agreement."

A. The Turbine Supply and Installation Agreement ("TSIA") category consists of the costs associated with the agreement under which Vestas will supply, transport, erect, install, test, and commission the Project's 127 wind turbines. The Turbine Supply and Installation Agreement reflects a firm, fixed total price for the wind turbines and the services of Vestas, other than for scope changes to which the parties may agree pursuant to the TSIA.

Q. Please describe the category "Balance of Plant ("BOP") Engineering, Procurement and Construction ("EPC") Agreement."

A. The Balance of Plant consists of costs associated with the agreement under which Horizon will engineer, procure, and construct all the materials and equipment

required to construct the Project other than the procurement and installation of the wind turbines. The Balance of Plant, Engineering, Procurement, and Construction Agreement reflects a firm, fixed total price for these materials and the services of Horizon, other than for scope changes to which the parties may agree pursuant to the Balance of Plant, Engineering, Procurement, and Construction Agreement.

Q. What costs are included under the category "Transmission Interconnection"?

A. The Project requires construction of a new Wind Ridge substation to interconnect the Project with PSE's transmission system. The costs also include necessary upgrades attributable to the Wild Horse Project to an existing transmission line.

Q. What costs are included under the "Start-Up" category?

A. The category "Start-Up" reflects the mobilization costs for the operation and maintenance of the Project, such as Vestas' commissioning and turnover of the turbines and the recruitment and relocation expenses of the PSE staff that will be part of the permanent operation of the Project. These costs are then offset by Start-Up revenue, which is the revenue that will be generated during the commissioning phase of the Project, prior to the Project being placed into service. As turbines are commissioned, they will operate in test mode as wind is available.

Test power will either be sold or used to offset market purchases PSE makes to balance its load.

Q. Please describe the category "Contingency."

A. During the course of construction of a major project, various events typically occur that require funds that were not specifically budgeted. For example, if conditions on the ground differ from assumptions made for the Balance of Plant, Engineering, Procurement, and Construction Agreement, a scope change (or "change order") may be required to complete an aspect of the Project. For these purposes, a contingency allowance helps assure that there are adequate funds budgeted to complete the Project.

The Contingency budget, approximately [redacted]% of the total anticipated Project cost, is at the low end of the range typical for a project of this size. It is also customary to assume that the entire contingency amount will have been exhausted by the time the Project is completed. To the extent any of the Contingency funds are not spent, they would be accounted for in a reduction in the capital cost of the Project during the true-up process described in Mr. Story's testimony.

Q. Please describe the category "AFUDC."

A. The AFUDC category reflects the return the Company is entitled to receive on the funds it invests for the Wild Horse Project during the course of the construction, prior to the Project being placed into service.

E. Construction Schedule and Status

Q. What is the schedule for construction of the Wild Horse Project?

A. PSE estimates that the Project will be substantially complete and placed into service by December 31, 2006. There are two major contracts that determine the construction schedule. Horizon provides all engineering, procurement and construction for the Balance of Plant scope of the Project pursuant to the Balance of Plant Engineering, Procurement and Construction Agreement. Horizon will, in turn, contract with various subcontractors for the engineering and construction of the civil and electrical facets of the Project, such as the roads, wind turbine foundations, the electrical collection system, the site substation, and the interconnecting transmission line. The primary Horizon subcontractor is RES, which successfully executed the construction of the Hopkins Ridge facility.

The Balance of Plant Engineering, Procurement and Construction Agreement does not govern the procurement or installation of the Project's wind turbines. Vestas is obligated to provide the supply, transportation, erection, installation, testing, and commissioning of all the Project's 127 wind turbines pursuant to deadlines set forth as part of the Turbine Supply and Installation Agreement.

Horizon is obligated under the Balance of Plant Engineering, Procurement and Construction Agreement to achieve Substantial Completion by December 4, 2006. Vestas is obligated under the Turbine Supply and Installation Agreement to achieve a Guaranteed Facility Substantial Completion by December 12, 2006, the

point in time when the work under both contracts is substantially complete and sufficient that the Project can safely and continuously operate in its intended capacity. Following Substantial Completion, the Project will begin routine commercial operation. Events of Force Majeure, which include "wind days" beyond a specified threshold, allow adjustments of the guaranteed completion date. Hence the Company's projection that the Project will go into service by December 31, 2006 (rather than December 12, 2006).

Q. What is the current status of the construction?

A. As of the end of January 2006:

- Horizon's mobilization onto the site had been completed. Mobilization of Vestas, the turbine supplier, will occur later this year as turbine equipment begins arriving at the site.

- Roads are being constructed under a priority system that emphasizes early completion in areas required for access to foundations, the substation and the equipment laydown areas.

- The first turbine foundation was completed January 25, 2006.

- Transmission line material has been delivered to the site.

- The PSE interconnect substation is at an advanced stage of construction and is preparing to receive and set equipment.

- Fabrication of the towers for the wind turbines has started.

A rolled-up schedule of construction milestones with current forecasted dates and corresponding percent of work completed as of January 31, 2006 is provided in Exhibit No. ___(RG-4HC).

Q. What is required to bring the Project into commercial operation?

A. The Project consists of 127 separate wind turbines, which will be positioned along the collection system into different electrical circuits, or "strings." Turbines will be erected and commissioned in strings so that portions of the wind farm can be brought on-line and operated while other parts remain under construction. To facilitate this incremental approach, the main Project infrastructure (performed by Horizon through the Balance of Plant Agreement) is scheduled to achieve substantial completion first. After Horizon completes its balance of plant scope in each priority area, Vestas will erect the turbines in that area. After erection Vestas will make final checkouts of each turbine, resulting in its commissioning. Commissioning involves connecting the turbine to the electrical grid. Once commissioned, the turbine achieves "Wind Turbine Generator Substantial Completion." Vestas will assume operation and monitor these turbines in an initial testing period until all turbines are complete.

When all turbines have achieved Wind Turbine Generator Substantial Completion and the rest of the Project is complete, the Project is determined to have reached Project Substantial Completion. At Project Substantial Completion, the Project is

placed into service in PSE's electric portfolio. The only tasks remaining at that time to achieve Final Completion involve cleanup of punch list items that do not interfere with the commercial operations of the Project.

Prior to Project Substantial Completion, one string may be operating and producing significant quantities of power while in another string, turbines might still be under construction. Power generated by the Project prior to Project Substantial Completion is "test power," the value of which will offset Project capital costs, as described above.

Q. What assurances does PSE have that the Project will actually be completed by December 31, 2006?

A. Horizon and its prime subcontractor, RES, are experienced construction contractors with a track record of completed projects and Vestas is an experienced turbine supplier with a successful track record. In addition, the Turbine Supply and Installation Agreement and Balance of Plant Engineering, Procurement and Construction Agreement provide for liquidated damages for project delays.

Q. What assurance does PSE have that Horizon and Vestas will be in a position to satisfy such obligations if they do not meet the deadlines?

A. PSE's due diligence into the financial strength of both Horizon and Vestas showed that they are reasonably likely to be able to satisfy any damages caused by delay of the Project. In addition, as part of its negotiations for the Project, PSE

obtained a guarantee from Horizon's parent, The Goldman Sachs Group, Inc., for Horizon's obligations and from Vestas' parent for its obligations.

F. Operations and Maintenance Expenses

Q. What arrangements has the Company made with respect to ongoing operations and maintenance ("O&M") for the Wild Horse Project?

A. PSE has entered into a separate Service & Maintenance Agreement and a Warranty Agreement with Vestas under which Vestas will provide a power curve warranty, a five-year availability warranty, a five-year mechanical warranty, a serial-defect warranty, and five years of maintenance, service, spare parts and service of the wind turbines. Operations and maintenance for the balance of plant and site management will be performed by PSE.

Q. Why did the Company decide to have Vestas perform O&M on the turbines for the first five years of the Project?

A. Wind turbines can be purchased with no warranty or with a warranty period of one to five years. As described above, Garrad Hassan recommended that PSE purchase a five-year warranty and this advice was supported by other due diligence PSE conducted in the industry. However, the major wind turbine suppliers will not sell a warranty without the associated O&M services.

Moreover, Vestas is an experienced wind turbine manufacturer and operator. As PSE is new to wind generation ownership and operation, the Company believed it made sense to contract with Vestas for several years as it built up its internal knowledge base and capacity to perform O&M on wind turbines.

Q. Are there other aspects to the operation and maintenance of the Project?

A. Yes. Vestas will operate and maintain the wind turbines only. The remainder of the plant will be operated and maintained by PSE or PSE subcontractors. This includes road maintenance and maintenance of the underground collection system, the overhead transmission line, the substation, and the operations and maintenance facility. PSE will hire a Plant Manager with administrative support to oversee these aspects of the Project maintenance, and to manage Vestas performance under the Service and Maintenance and Warranty Agreements.

To support the scheduling of wind power for purposes of transmission and integration, PSE will retain a nationally recognized expert in forecasting wind energy production.

Q. What does the Company project its O&M expenses will be for the Wild Horse Project during the rate year?

A. The Company anticipates total O&M costs of $[redacted] during the rate year, as detailed in Exhibit No. ___(RG-5HC).

III. THE ORMAT PURCHASE POWER AGREEMENT

Q. Please describe the ORMAT Purchase Power Agreement?

A. On January 18, 2006, PSE entered into a 20-year power purchase agreement with ORMAT for the output of ORMAT's 4.95 MW Recovered Energy Generation Facility to be located at the Northwest Pipeline Corporation's Sumas Gas Compressor Station in Sumas, Washington (the "Facility").

Under the ORMAT PPA, ORMAT will sell to PSE the entire output of energy (and environmental attributes related to the generation of energy should any exist) from the Facility on an "as produced" basis. Due to the nature of the host heat source, there may be times when the output is less than the full capacity of the Facility; therefore, no firm or guaranteed energy is offered and no capacity payments are to be made. Thus, the ORMAT PPA is a "take-and-pay" contract and PSE will pay only for the energy produced by the Facility.

Q. Why did the Company enter into a power purchase agreement with ORMAT rather than purchase the Facility?

A. In the original proposal, ORMAT offered both a 20-year purchase power agreement and a PSE ownership option. In the Company's initial economic analyses, the project pro forma showed that the ownership option, as proposed, was a low cost resource. Thus, PSE entered into a Letter of Intent with ORMAT for the purchase of the Facility.

However, during the Company's additional due diligence phase subsequent to placing ORMAT on the 2004 RFP Process Stage 2 short list, the Company became concerned about the Facility's actual likely capacity factor. Additionally, the negotiations with Northwest Pipeline on the Waste Heat Host Agreement pushed cost, regulatory, and heat supply risks solely to PSE. To mitigate theses risks, PSE shifted the risks to ORMAT by changing from a PSE ownership structure to a 20-year PPA under which PSE will pay only for the energy delivered to its system.

Q. When is such delivery of energy scheduled to begin?

A. The Guaranteed Commercial Operations Date ("COD") under the ORMAT PPA is 22 months after execution of the contract. At ORMAT's option, the period to achieve COD can be extended from 22 to 26 months. If the project does not achieve the COD or if performance tests under the contract are unsuccessful, PSE may terminate the PPA and is entitled to a payment of $[redacted] from ORMAT. ORMAT has provided a corporate guaranty to secure its obligations under the PPA.

Q. Why is the ORMAT transaction beneficial to PSE?

A. As described by Mr. Elsea, the Company's analyses showed that the ORMAT PPA has an estimated 20-year levelized cost of approximately $[redacted]/MWh, including $[redacted]/MWh of imputed debt cost, and a portfolio benefit of $0.4 million in

the base price scenario when compared with generic resources from the 2005 LCP.

In addition, this resource, through the productive use of waste heat from Northwest Pipeline compressor turbines, provides additional supply diversity to PSE's portfolio. Because the energy is delivered to PSE's system, transmission risks are also reduced.

IV. HOPKINS RIDGE WIND PROJECT UPDATE

Q. What is the current status of the Hopkins Ridge Wind Project?

A. The Hopkins Ridge Wind Project began commercial operation on November 27, 2005. Remaining minor construction items (punch list items) are currently being completed and power performance tests are being performed. These activities are scheduled to be completed in the first quarter of 2006.

Q. Is the Hopkins Ridge Project on budget?

A. The project is currently projected to come in under budget by $10 million, for a total of approximately $189 million. The greatest savings are projected to be from unused funds for contingency and AFUDC.

Q. How has Hopkins Ridge performed since it was placed into service?

A. Since November 27, 2005, Hopkins Ridge has operated at a capacity factor of [redacted]%, above its projected capacity factor of [redacted]%. In January 2006, Hopkins Ridge operated at a 54.5% capacity factor, compared to its projected capacity factor for that month of [redacted]%.

V. CONCLUSION

Q. Did the Company's acquisition of the Wild Horse Project satisfy the evaluation criteria set out in the Company's RFPs?

A. Yes, it did.

The Project is compatible with PSE's need. It is projected to provide [redacted] aMW of January energy, when PSE's need is high.

The Project will minimize PSE's costs. The Project was the next lowest cost resource available to PSE out of the 2004 RFP Process after the Hopkins Ridge Project and the 2-year Arizona Public Service PPA, which the Company also acquired. The Wild Horse Project is anticipated to lower PSE's net present value portfolio costs by $54 million over 20 years compared to the Business as Usual Scenario analyzed in PSE's 2005 Least Cost Plan.

The Project minimized PSE's risks. PSE's second wind generation facility will further reduce the exposure of the Company's electric portfolio to fuel cost risks.

Vestas is a world-class manufacturer of state of the art wind turbines with substantial experience and a worldwide commitment to wind energy resources, and Horizon is a leading developer and constructor of wind energy projects. Furthermore, the Project agreements provide significant additional protections to PSE including warrantees and parental guarantees.

The Project includes public benefits. Unlike some other potential generation sites, the Project employs zero emissions technology with minimum impacts on the natural environment.

The Project met PSE's strategic and financial needs. By acquiring 100% ownership of the Project, PSE increased its flexibility with respect to future dispatch of the Project and eliminated costs associated with providing credit support for a PPA and debt that would have been imputed to PSE by ratings agencies if the transaction had been a PPA.

Q. Did the Company's acquisition of the ORMAT PPA also satisfy the evaluation criteria set out in the Company's RFPs?

A. Yes. This PPA provides another long-term resource for PSE's electric portfolio at a favorable cost, even after including imputed debt costs. The PPA take or pay structure minimizes risks to PSE associated with operation of ORMAT's Facility. Finally, public benefits associated with the ORMAT PPA include support for a project that makes use of waste heat at an existing industrial site to generate electricity with nearly zero emissions.

Q. Does that conclude your testimony?

A. Yes, it does.

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