EXHIBIT NO. ___(LEO-1CT)
DOCKET NO. UE-13____
2013 PSE PCORC
WITNESS: L. EDWARD ODOM

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.,** **Respondent.**	**Docket No. UE-13____**

PREFILED DIRECT TESTIMONY (CONFIDENTIAL) OF L. EDWARD ODOM ON BEHALF OF PUGET SOUND ENERGY, INC.

REDACTED VERSION

APRIL 25, 2013

PUGET SOUND ENERGY, INC.

PREFILED DIRECT TESTIMONY (CONFIDENTIAL) OF L. EDWARD ODOM

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PUGET SOUND ENERGY, INC.

PREFILED DIRECT TESTIMONY (CONFIDENTIAL) OF L. EDWARD ODOM

I. INTRODUCTION

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

A. My name is L. Edward Odom. My business address is 10885 N.E. Fourth Street Bellevue, WA 98004. I am the Director of Thermal Resources for Puget Sound Energy, Inc. ("PSE").

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

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

Q. What are your duties as Director of Thermal Resources for PSE?

A. I plan, organize, and direct PSE's gas and coal electric energy production, including operations, maintenance and modernization of PSE's owned and jointly-owned generating facilities. My duties also include managing PSE's thermal purchased power agreements. Furthermore, I assist the resource acquisition team in performing due diligence evaluations of potential thermal resource acquisitions. I am responsible for overseeing the safe operation of PSE's natural gas and coal generation plants and optimizing their operation in a manner that will benefit our customers and develop our employees to their maximum

potential. I work to promote and support a culture of total safety in our operations.

Q. Please summarize your testimony.

A. First, I provide an overview of the production operations and maintenance ("O&M") expense included in the 2013 power cost only rate case ("PCORC"). Second, I discuss the O&M expense for PSE's wholly owned and jointly owned thermal generation stations, including major maintenance. Finally, I focus my testimony on the Ferndale Generating Station, which PSE purchased, effective November 15, 2012. I provide a brief description of the Ferndale Generating Station, its expected life and depreciation, and projected rate year O&M expense for the plant.

Q. What other testimonies are addressing production O&M costs?

A. Production O&M expense associated with PSE's hydro and wind facilities will be addressed by Mr. Wetherbee. Please see Exhibit No. ___(PKW-1CT).

II. OVERVIEW OF RATE YEAR PRODUCTION OPERATIONS AND MAINTENANCE EXPENSE

A. Rate Year Production Operations and Maintenance Expense

Q How has PSE prepared its rate year production operations and maintenance expense for the rate year?

A. PSE developed the rate year production O&M expense in accordance with the Final Order in Dockets UE-111048 and UG-111049 ("2011 GRC"). For most

plants, PSE utilizes test year O&M expense and makes certain pro forma adjustments as previously allowed by the Commission.

Q. For what plants does PSE use something other than test year O&M expense to project its rate year O&M expense?

A. The rate year O&M expenses for PSE's jointly-owned facilities, Colstrip Units 1 and 2, Colstrip Units 3 and 4 and the Frederickson 1 generating station ("Freddy 1"), are developed from budgets and business plans provided by the plant operator and approved by the owners. The Ferndale Generating Station is newly acquired by PSE. Due to the lack of test year data, the rate year O&M is based upon budgeted O&M. Royalties, rents and contract maintenance expense for PSE's wind generating stations have been pro formed to reflect rate year projected generation. This is consistent with the methodology by which the Commission has determined O&M expenses for purposes of rate year power costs for these thermal and wind facilities in the past several general rate cases

Q. What is PSE's production O&M expense for the rate year?

A. The rate year production O&M costs are forecast to be $135.0 million, an increase of $1.4 million over the 2011 GRC production O&M costs of $133.6 million. Please see Exhibit No. ___(LEO-3C) for a summary of the rate year production O&M costs.

B. Pro forma Adjustments to Operations and Maintenance Expense

Q. Please describe the nature of the pro forma adjustments made to production O&M costs in this filing.

A. The test year for this proceeding is October 2011 through September 2012. PSE has made certain adjustments to test year expenses in calculating the November 2013 through October 2014 ("rate year") production O&M expense as follows:

(i) added $6.9 million to test year production O&M to reflect projected rate year O&M associated with the Ferndale Generating Station acquired in November 2012;

(ii) added $4.3 million to test year production O&M to reflect projected Colstrip O&M costs based upon forecasted O&M costs provided by the plant operator, PPL Montana;

(iii) added $0.2 million to test year production O&M expense to reflect projected Freddy 1 O&M costs based upon forecasted O&M costs provided by the plant operator, Atlantic Power Corporation;

(iv) reduced test year O&M $1.1 million to reflect rate year amortization of contract major maintenance:

- reduced test year O&M $0.9 million to remove test year amortization associated with contract major maintenance performed at the Goldendale Generating Station. PSE anticipates no rate year amortization of Goldendale contract major maintenance;

- reduced test year O&M $0.4 million to remove test year amortization associated with contract major maintenance performed at the Sumas Generating Station. PSE anticipates no rate year amortization of Sumas contract major maintenance;

- added $0.2 million to test year O&M to reflect the expected $0.7 million rate year amortization

associated with contract major maintenance at the Mint Farm Generating Station;

(v) added $0.1 million to test year O&M to reflect increased storage rental fees at Jackson Prairie. The contract fee was updated in March 2013;

(vi) [redacted]

(vii) added $1.1 million to test year O&M to reflect projected rate year FERC relicensing cost associated with the Baker River and Snoqualmie Falls Hydroelectric Projects. Baker River and Snoqualmie Falls licensing costs are discussed in the Prefiled Direct Testimony of Mr. Paul Wetherbee, Exhibit No. ___(PKW-1CT);

(viii) added $0.5 million to test year O&M to reflect the rate year staffing level at the Snoqualmie Generating Station and to reflect the addition of a technician and two journeymen to support new generation installed at the Baker and Snoqualmie Falls Generating Stations. This adjustment is discussed in the Prefiled Direct Testimony of Mr. Paul Wetherbee, Exhibit No. ___(PKW-1CT);

(ix) added $5.3 million to test year wind production O&M expense to reflect projected rate year contract maintenance and royalty costs under the Vestas/Siemens maintenance contracts and royalty contracts for the Hopkins Ridge, Wild Horse/Wild Horse Expansion and Lower Snake River Phase I ("LSR Phase 1") wind projects based upon projected rate year wind generation. Rate year costs for PSE's wind facilities are discussed in the Prefiled Direct Testimony of Mr. Paul Wetherbee, Exhibit No. ___(PKW-1CT);

(x) added $1.0 million to test year O&M to reflect projected rate year other production O&M costs for the LSR Phase 1 wind facility. The LSR Phase 1 facility was placed in service in late February of 2012 and was operational for only seven months during the test year. The adjustment

used a pro forma expense based upon the actual other production O&M expense for the twelve months ending February 28, 2013. Rate year costs for LSR Phase 1 are discussed in the Prefiled Direct Testimony of Mr. Paul Wetherbee, Exhibit No. ___(PKW-1CT);

(xi) reduced test year O&M $1.0 million to remove test year LSR Phases 2-5 O&M expense.

C. Thermal -Coal Resource Operations and Maintenance Costs

Q. What are the sources of other operation and maintenance costs for the Colstrip Generating Station?

A. The O&M costs for both of PSE's jointly-owned facilities, the Colstrip units and Fredrickson 1, are developed from budgets and business plans provided by the plant operator and approved by owners. Colstrip fuel costs are developed from Annual Operating Plans prepared by the coal supplier, Western Energy Company. The WUTC has approved of this practice for determining rate year power costs in the past several rate cases.

Q. Are major overhauls and other outages for the Colstrip units identified in the preparation of the power costs?

A. Yes, both overhauls and other outages for the Colstrip units are identified in the inputs to the AURORA model discussed in the Prefiled Direct Testimony of David E. Mills, Exhibit No. ___(DEM-1CT). Major overhauls are identified specifically, by date and duration. Additionally, the average of the most recent four years of other maintenance outages and deratings, forced outages and forced deratings of the units, called the planning Forced Outage Rate ("FOR") are

calculated and the available energy production is reduced by this average. In this case, the four-year average covers the time period 2009 through 2012. The FOR for Colstrip Units 1 and 2 of 8.22 percent is calculated separately from the FOR for Colstrip Units 3 and 4 of 11.61 percent because of the differences in the unit design and equipment.

Q. What are the major overhauls that are included for the rate year?

A. There is one outage and two unit deratings planned during the rate year. Unit 3 will be offline for [redacted]. Unit 1 will be [redacted]. Unit 2 will be [redacted]

Q. Are there other assumptions PSE applies to the AURORA modeling of the Colstrip units?

A. Yes, the AURORA model uses several Colstrip-specific data inputs. In addition to the FOR input, PSE's AURORA model also includes (1) the four-year average heat rate for Units 1 and 2 and Units 3 and 4; (2) the average transmission line losses on the Colstrip Transmission system of 2.92 percent; and (3) the forecasted costs of coal and the average rate year coal heat content from the coal supplier's annual operating plans.

Q. Does PSE anticipate making any updates to the rate year O&M for its jointly-owned facilities?

A. PSE proposes to update production O&M for its jointly-owned facilities if information changes during this proceeding.

III. OPERATIONS AND MAINTENANCE EXPENSE OF PSE'S SIMPLE CYCLE AND COMBINED CYCLE COMBUSTION TURBINE GENERATION FACILITIES

A. Non-Major Maintenance and Operating Expense of PSE's Simple Cycle and Combined Cycle Combustion Turbine Facilities

Q. What is the basis for the calculation of operations and maintenance expense, other than major maintenance, for PSE's owned and jointly-owned generation stations?

A. As previously discussed, PSE generally uses a test year level of production O&M expense to represent a normal level of operating expenses for PSE's owned and operated gas fired turbines. For PSE's jointly-owned gas fired turbine, Freddy 1, the plant operators budget, except for major maintenance costs, represents the rate year level of production O&M. O&M for "new generation"—generation facilities placed in service subsequent to the test year–is based upon budgeted rate year O&M. To summarize:

(i) The Goldendale, Mint Farm, Encogen, Sumas, Frederickson, Fredonia, Whitehorn and Crystal Mountain facilities rate year production O&M is based upon actual test year production O&M expense;

(ii) The jointly-owned Freddy 1 rate year production O&M is based upon projected rate year operating costs provided by

the plant operator, Atlantic Power Corporation (formerly Capital Power Corporation);

(iii) The Ferndale production O&M is based upon budgeted rate year O&M.

This treatment is consistent with the manner in which production O&M was determined in PSE's 2009 and 2011 general rate cases.

B. Major Maintenance of PSE'S Simple Cycle and Combined Cycle Combustion Turbine Facilities

Q. What is the basis for the projected major maintenance events and expenditures?

A. The basis for projected rate year major maintenance expense for generation facilities in service during the rate year is as follows:

(i) For simple cycle combustion plants (Whitehorn, Crystal Mountain, Frederickson, Fredonia 1 & 2 and Fredonia 3 & 4), actual major maintenance costs incurred in the test year represent known and measurable costs which are indicative of a normal level of maintenance expense;

(ii) The Commission has stated that PSE may file a petition for deferral accounting of future major maintenance events.[1] Once an event has occurred and the Commission grants deferral accounting treatment, pro forma rate year amortization would be included in production O&M expense. Such plants are Freddy 1, Goldendale, Sumas and Mint Farm. As discussed below, PSE filed a petition with the WUTC to obtain deferral accounting treatment for the hot gas path ("HGP") inspection to be performed [redacted] at the Mint Farm facility. This work will be performed by General Electric International "GEI" under PSE's existing LTSA; and

[1] *See WUTC v. Puget Sound Energy, Inc.* Dockets UE-111048 and UG-111049, Order 08 ¶ 321 (May 7, 2012).

(iii) The Ferndale Generating Station was not included in PSE's test year O&M expense as it is new generation that was acquired after the test year. If non-contract major maintenance is anticipated to be performed on new generation during the rate year, amounts budgeted for such major maintenance would be included in production O&M. No non-contract major maintenance on new generation is currently anticipated and no such major maintenance was included in this proceeding.

Q. What is the cost for major maintenance associated with PSE's owned and jointly-owned simple and combined cycle combustion turbine facilities included in this proceeding?

A. PSE's rate year major maintenance expense is $5.8 million. Non-contract major maintenance in this filing is $5.1 million as compared to $8.2 million of non-contract major maintenance included in the 2011 GRC. Amortization of contract major maintenance expense in this filing is $0.7 million, compared to $0.1 million in the 2011 GRC. The contract major maintenance amortization included in this filing is associated with an HGP inspection to be performed at the Mint Farm Generating Station. On April 23, 2013, PSE filed a petition for deferral of this event and included contract major maintenance amortization as requested in the petition.

C. Mint Farm Hot Gas Path Inspection

Q. Please provide background related to the Mint Farm LTSA under which the Mint Farm HGP Inspection is to be performed in 2013.

A. In December 2008, PSE purchased the Mint Farm from Wayzata Opportunities Fund, LLC ("Wayzata"). Mint Farm is a combined cycle plant with a natural gas

fired General Electric "GE" 7FA combustion turbine ("CT") driving a generator and a Fuji steam turbine and generator driven by steam produced using the waste heat of the CT exhaust. Wayzata had entered into a LTSA with General Electric International ("GEI") effective June 16, 2004 for planned maintenance services on the gas turbine generating unit. Under this agreement, GEI would perform eight planned major service events over the term of the LTSA, four combustion inspections ("CI") and four HGP inspections. PSE assumed the contract with the acquisition of the plant. The term of the LTSA is expected to expire in 2026. Major maintenance events under the contract occur roughly every 12,000 operating hours based upon maintenance intervals established by GEI.

Q. Please describe the scope of the Mint Farm HGP inspection.

A. The HGP inspection entails the disassembly of combustion and turbine sections of the CT so that parts may be inspected and repaired or replaced as necessary. The combustion section of the CT is where the natural gas is combined with compressed air and burned. The turbine section of the CT is where mechanical energy is extracted from the high speed flow of hot combustion gases exiting the combustion chambers. [redacted].

Q. Please describe the accounting treatment of payments made under the Mint Farm LTSA.

A. Payments to GEI under the Mint Farm LTSA are made quarterly and are based upon the hours the plant was run during the quarter, referred to as the factored

fired hours ("FFH"). GEI's billings are received in the third month of each quarter and are based upon the actual hours for the first two months of the quarter and an estimate of the run hours for the third month. Any difference between the actual and billed run hours in the third month is "trued up" in the following quarter's billing. The FFHs are multiplied by an hourly fee that is contractually adjusted for price escalation in July of each year. PSE follows Accounting Standard Codification ("ASC") 908-360-25 (previously FASB Staff Position, No. AUG AIR-1, Accounting for Planned Major Maintenance Activities, September 8, 2006) ("AUG AIR-1") when accounting for its major maintenance. The maintenance performed under the LTSA is comprised of materials and activities that are grouped in three cost categories: 1) capital units of property; 2) current maintenance support; and 3) prepaid maintenance expense. PSE allocates 37 percent of the FFH fee to prepaid maintenance expense. This percentage is based on a work study that was performed at the inception of the contract and which studied the type of services to be performed over the term of the contract. The portion of each quarterly payment allocable to prepaid expense under the Mint Farm LTSA is charged to a prepaid expense account 16500741 –Mint Farm Prepaid Expense.

Q. Please describe the calculation of the Mint Farm HGP inspection amortization expense included in the rate year.

A. PSE included amortization expense in the amount of $634,721 in the rate year for the Mint Farm HGP inspection. On April 23, 2013, PSE filed an accounting

petition requesting the establishment of a regulatory asset for the prepaid expense associated with the Mint Farm HGP inspection and the amortization of the same over a thirty-six month period beginning with the date rates are effective in this docket. As of March 31, 2013, the balance in account 16500741 – Mint Farm Prepaid Expense was $1,904,162.13. The next quarterly payment will not be processed until June, 2013; accordingly, the balance in the prepaid expense account at the time of the Hot Gas Path Inspection will be $1,904,162.13. Amortization over a thirty-six month period would result in a monthly amortization of $52,893, or $634,721 for twelve months. If the results of the accounting petition are different than proposed, this adjustment would need to be updated accordingly. Please see the Prefiled Direct Testimony of Katherine J. Barnard, Exhibit No. ___(KJB-1CT), for discussion of the rate making treatment requested in this filing related to the accounting petition.

Q. Why was a three-year period assumed for the amortization calculation?

A. Major maintenance events under the contract occur roughly every 12,000 hours based upon maintenance intervals established by GE. Accordingly, the actual timing is dependent upon the facility's capacity factor (hours run/hours in period). Mint Farm, like Goldendale, is a base load plant. Base load plants tend to have fairly stable operating profiles. The table below lists the actual maintenance dates and intervals for the Mint Farm and Goldendale facilities. Both plants are combined cycle base load plants equipped with the GE 7FA combustion turbine. Both plants are under long term maintenance agreements with GE.

GE 7FA Major Maintenance Intervals:

Event	Date	Interval (Months)
Mint Farm Scheduled Major Maintenance History		
MTF Combustion Inspection Capital	6/15/10	
MTF Hot Gas Path Capital	[redacted]	34
Goldendale Scheduled Major Maintenance History		
CAP-GLD Compressor Failure Repairs	6/15/08	
GLD Hot Gas Path Capital	6/15/11	36
GLD Combustion Inspection Capital	[redacted]	36

D. Status of Major Maintenance Contracts

Q. What is the status of major maintenance contracts for PSE's thermal generating facilities?

A. PSE currently has long term major maintenance agreements with GEI to provide combustion turbine major maintenance services at the Sumas, Goldendale and Mint Farm facilities. These agreements are expected to expire in 2014, 2016 and 2026, respectively. There is also a long term maintenance agreement with GEI at the jointly-owned Freddy 1 Generating Station that will terminate in 2021. PSE is currently soliciting bids for a long term major maintenance agreement that would encompass those combustion turbine facilities that are not currently covered under a long term maintenance agreement. At this time, it is unknown when, or if, such an agreement will be consummated.

IV. FERNDALE GENERATING STATION

A. General Discussion

Q. Please describe the Ferndale Generating Station.

A. The Ferndale Generating Station is located in Whatcom County, Washington. It is situated on a 16-acre site within the 850 acre boundary of the Phillips 66 refinery. The plant began commercial operations in April, 1994. The plant is configured with two GE 7EA combustion turbines and heat recovery steam generators providing steam to drive a single GE steam turbine. The electric generators for all three units were also manufactured by GE. The plant capacity estimate for a peak event to occur at 23 degrees Fahrenheit is 285 MW with duct firing. The combustion turbines are dual fuel capable, meaning they may produce energy by burning natural gas or diesel fuel. Accordingly, there is a 2.05 million gallon fuel oil storage tank on site. The plant has a natural gas interconnection with Cascade Natural Gas via Sumas. The generation station's water supply is furnished under agreement with Whatcom County PUD.

Q. Does PSE lease the property on which the plant is located?

A. Yes, PSE leases the property from Phillips 66.

Q. What is the term of the lease?

A. The lease for the property on which the plant sits expires in August 2041. Further, the lease includes specific end of term requirements that will require PSE

to remove all surface and subsurface improvements nearly two years prior to the end of the lease term and perform soil remediation of the facility site.

Q. What is the expected life of the Ferndale Generating Station?

A. The expected remaining life of the Ferndale Generating Station is twenty-seven years and one month, beginning with the November 15, 2012 acquisition date and ending December 15, 2039. The plant will be removed from service in 2039 to allow time to remove surface and subsurface improvements and perform required soil remediation prior to the expiration of the lease in August 2041.

Q. What depreciation life is PSE proposing for the Ferndale Generating Station?

A. PSE plans to depreciate the acquisition costs over a 325 month (27-year, one month) term: November 15, 2012 through December 15, 2039. The amount depreciated includes both the total acquisition cost of the facility and the associated retirement obligation related to the removal and restoration costs noted above. PSE has used the net present value of the expected future remediation cost less salvage value to estimate the additional depreciation necessary to recover the cost of returning the facility to its contractually obligated condition. The value used was based on third-party estimates prepared in 2005 for Phillips 66 in connection with the lease between Phillips 66 and Tenaska Washington Partners, L.P.

B. Ferndale Operations and Maintenance Contract

Q. Please describe the operating contract for Ferndale Generating Station.

A. PSE executed a five-year contract with North American Energy Service ("NAES"). The contract includes all aspects of operations and maintenance of the plant. This contract is generally a "pass through" contract where NAES passes through actual costs of operations and maintenance without mark-up. NAES provides this service at a negotiated annual management fee. Under the contract terms, it is also possible for NAES to earn an annual bonus if specific goals are attained.

Q. Why did PSE contract with a third party for the operation of the plant?

A. There were several factors, which weighed heavily on the decision to operate the Ferndale Generating Station with a third-party provider.

1) It was important to be able to keep the crew intact at the plant and to take advantage of the many years of experience and knowledge that the resident crew possesses.

2) The third-party operator selected has a proven record of success for operating and maintaining combined cycle combustion turbine ("CCCT") plants across the United States and now operates more than 120 plants worldwide. O&M programs implemented by NAES at Ferndale Generating Station will provide a benchmarking opportunity with plants currently operated by PSE. PSE will be able to leverage the CCCT operating experience to benefit all of PSE's CCCT facilities.

3) The cost for the third-party operator is competitive with current PSE operated plants.

Q. Do customers benefit from the decision to use an outside contractor to operate the plant?

A. Yes, customers benefit from having the plant operated by an experienced operator with a proven record of success, who can operate the plant at a competitive cost and provide benchmarking opportunities with plants currently operated by PSE. Also, customers benefit because the contract allows an experienced and highly-trained crew to remain intact at the plant.

C. Rate Year O&M Expense for the Ferndale Generating Station

Q. Have you determined the operations and maintenance expense for the Ferndale Generating Station during the rate year?

A. Yes, the Ferndale Generating Station operations and maintenance expense has been determined to be $6.9 million for the rate year.

Q. What is the basis for the calculation of operations and maintenance expense for the Ferndale Generating Station?

A. The $6.9 million O&M expense includes budgeted amounts provided by NAES as well as contractually defined fees and incentives payable to NAES by PSE during the rate year. The rate year O&M also includes incremental O&M costs incurred by PSE to support Ferndale Generating Station operations and manage the NAES contract.

Q. Why are incentives to NAES included in the rate year O&M expense?

A. Incentives are included in the NAES contract to further align the contractor's operations with PSE's corporate objectives concerning safety, reliability, environmental stewardship and cost containment.

D. Ferndale Major Maintenance

Q. What amount of major maintenance expense is included in this proceeding for Ferndale?

A. There are no major maintenance costs included in the rate year production O&M costs for Ferndale because there is no major maintenance planned for Ferndale in the rate year. If PSE's budget did include planned major maintenance for Ferndale, PSE would have included those costs in rate year production O&M costs and requested full recovery.

V. CONCLUSION

Q. Does this conclude your testimony?

A. Yes.