EXHIBIT NO. ___(DEG-9T)
DOCKET NOS. UE-090704/UG-090705
2009 PSE GENERAL RATE CASE
WITNESS: DONALD E. GAINES

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.,** **Respondent.**	**Docket No. UE-090704** **Docket No. UG-090705**

PREFILED SUPPLEMENTAL DIRECT TESTIMONY (NONCONFIDENTIAL) OF DONALD E. GAINES ON BEHALF OF PUGET SOUND ENERGY, INC.

SEPTEMBER 28, 2009

PUGET SOUND ENERGY, INC.

PREFILED SUPPLEMENTAL DIRECT TESTIMONY (NONCONFIDENTIAL) OF DONALD E. GAINES

CONTENTS

PUGET SOUND ENERGY, INC.

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I. INTRODUCTION

Q. Are you the same Donald E. Gaines who provided prefiled direct testimony in these dockets on behalf of Puget Sound Energy, Inc. ("PSE")?

A. Yes, I filed prefiled direct testimony, Exhibit No. ___(DEG-1T) and seven supporting exhibits (Exhibit No. ___(DEG-2) through Exhibit No. ___(DEG-8)).

Q. What topics are you covering in your prefiled supplemental direct testimony?

A. This prefiled supplemental direct testimony presents PSE's updated electric and gas load forecast (the "F2008R load forecast"), which replaces the F2008 load forecast originally presented in the workpapers of Mr. David E. Mills, DEM-WP(C) Power Cost Summary 2009GRC.xls, tab "F08 Load". The F2008R load forecast better reflects the current economic environment than the F2008 load forecast, which PSE prepared in the fall of 2008.

This prefiled supplemental direct testimony also updates PSE's projected cost of long-term debt and revised rate of return in light of a recent $350 million senior secured note offering by PSE. This offering lowers (i) PSE's projected cost of

long-term debt from 6.82% to 6.70%, and (ii) PSE's requested rate of return from 8.56% to 8.50%.

II. UPDATED ELECTRIC AND GAS LOAD FORECAST

A. Overview Of Load Forecasting

Q. Please describe how PSE performs its long-term load forecast.

A. Each year, PSE collects and analyzes data to create a 20-year projection of gas and electric billed energy sales, customer counts, and peak demand. PSE employs econometric models that use historical data to explain changes in billed sales per customer and customer counts to produce forecasts of energy demand and customer growth.

Inputs in the econometric models include, but are not limited to, variables describing regional and national economic growth, demographic changes, weather, retail prices, and seasonality. PSE also adjusts for known large load changes. For example, PSE would adjust for large load changes resulting from the closure of a major customer or the addition of a new, large business.

To forecast billed sales per customer and customer counts, PSE divides customers into billing classes and service levels that use energy for similar purposes and at comparable retail rates.

Q. Why does PSE forecast energy demand in the form of billed sales per customer?

A. Energy use data pertaining to individual usage classes (e.g., residential, commercial, and industrial) are only available on a long-term historical basis as monthly billed sales. By separating sales into usage classes, PSE is able to model each class separately using class-specific input variables such as retail rates, different economic-demographic variables, and specific end-use weather variables to remove the impact of weather. For example, the general unemployment rate affects the billed sales per customer for the residential class, but changes in manufacturing employment in particular more significantly affect the billed sales per customer for the industrial class.

Q. How does PSE forecast national and regional economic-demographic conditions for use in the load forecast models?

A. PSE bases its load forecast equations on a forecast of economic-demographic variables for the counties in each PSE service territory. An outside consultant originally created and operated the service territory and county-level economic-demographic models. PSE staff now maintains and operates the models, and an outside consultant reviews the results. The primary inputs to the service territory economic-demographic models are U.S. macroeconomic variables. PSE uses the U.S. macroeconomic forecast provided in a subscription service from IHS Global Insight.

Q. Please describe how PSE incorporates programmatic conservation targets into the billed sales forecast.

A. PSE discretely subtracts programmatic conservation estimates from the billed sales forecast to create a "billed sales with conservation" forecast. PSE's two-year programmatic conservation targets are (i) adopted based on analysis of savings potentials and (ii) developed in collaboration with key external stakeholders represented by the Conservation Resource Advisory Group ("CRAG"). For years beyond the two-year conservation targets, the load forecast uses the conservation targets as estimated in the most current Integrated Resource Plan ("IRP"). The F2008R load forecast uses conservation targets from PSE's 2009 IRP.

Q. How does PSE convert the billed sales forecast to a forecast of delivered loads?

A. Using information about billing cycles, PSE estimates the unbilled sales in each forecast month. These estimates of unbilled sales account for patterns of normal weather during each forecast month.

Delivered loads in the current month are equal to the sum of (i) the billed sales in the current month and (ii) the difference between unbilled sales in the current month and unbilled sales in the previous month:

$$Delivered\ Loads_t = Billed\ Sales_t + Unbilled\ Sales_t - Unbilled\ Sales_{t-1}$$

PSE then converts the forecast of delivered loads into a forecast of "Generated,

Purchased, and Interchanged" load ("GPI")[1] by adding an estimate of line losses. (Currently, PSE's estimated system loss factor is 6.7%).

Q. How is a new load forecast adopted for power cost planning?

A. The Energy Management Committee ("EMC") approves a new load forecast for hedging and power cost planning. The EMC approved the F2008 load forecast in November 2008 and approved the F2008R load forecast in July 2009.

Q. Did PSE use the F2008R load forecast in the development of its 2009 Integrated Resource Plan?

A. No. Typically, PSE uses the most current load forecast in its IRP analysis. At the time PSE began the 2009 IRP analysis, the F2007 load forecast was the most recent load forecast available. Upon its completion, the 2009 IRP analysis included several load scenarios, one of which (the "2009 Low" scenario) was a precursor to the F2008R load forecast. The F2008R load forecast, however, was neither completed nor approved in time for use in the 2009 IRP. The economic-demographic forecast in the "2009 Low" load forecast scenario used in the 2009 IRP analysis is similar to the F2008R load forecast.

[1] GPI is equivalent to delivered electric loads plus losses.

B. Revision To The Load Forecast

1. Background Regarding the Need to Update the F2008 Load Forecast

Q. Why did PSE revise the F2008 load forecast?

A. The economic data used to prepare the F2008 load forecast have changed dramatically since PSE prepared this load forecast during the fall of 2008. Recent service territory economic historical and forecast data, created in the process described earlier and used by PSE to forecast billed sales per customer and customer growth, were strongly affected by the economic weakening that occurred regionally between September 2008 and March 2009. For example, the unemployment rate in PSE's service territory—a major input to residential class billed sales per customer—increased by 75% (from 4.8% in 2008 Q3 to 8.4% in 2009 Q2). Total (non-agricultural) employment in PSE's service territory—a major input to commercial class billed sales per customer and customer growth—had the largest one quarter drop in employment since at least 1970. Manufacturing employment in PSE's service territory—a major input to industrial class billed sales per customer and customer growth—lost over 16,000 jobs between 2008 Q4 and 2009 Q2, the largest three-quarter drop since 1993.

Q. Since the completion of the F2008 load forecast, how have the economic impacts of the current recession affected PSE's electric load and customer growth rates?

A. On a weather-normalized basis, electric load per customer for the first eight

months of 2009 was 2.7% lower than the electric load per customer for the first eight months of 2008. This reduction in load per customer was a dramatic change from the average annual growth in electric load per customer of 0.3% that occurred between calendar years 2003-2008.

Between August 2008 and August 2009, the total number of electric customers increased by only 0.7%, which is less than half of the average annual electric customer growth rate of 1.9% that occurred between calendar years 2003-2008. A 12-month electric customer growth rate of 0.7% is the lowest 12-month electric customer growth rate since at least 1980.

Q. Since the completion of the F2008 load forecast, how have the economic impacts of the current recession affected PSE's gas load and customer growth rates?

A. On a weather-normalized basis, gas load per customer for the first eight months of 2009 was 6.8% lower than the gas load per customer for the first eight months of 2008. This reduction in load per customer was a dramatic change from the average annual decline in gas load per customer of -1.4% that occurred between calendar years 2003-2008.

Between August 2008 and August 2009, the total number of gas customers increased by only 0.9%, less than one-third of the average annual gas customer growth rate of 2.9% that occurred between calendar years 2003-2008. A 12-month gas customer growth rate of 0.9% is the lowest 12-month gas customer

growth rate since at least 1982.

2. Process of Revision to the F2008 Load Forecast

Q. What changes did PSE make to its load forecast?

A. PSE first updated the service territory economic-demographic models to reflect the weaker historical economic data that occurred during the recession. PSE revised the economic forecast for 2010-11 based on Global Insight's March 2009 long-term U.S. macroeconomic forecast which reflected weaker economic conditions to persist into 2010. In particular, Global Insight forecast improvement in the unemployment rate to lag the official end to the recession and not decrease on an annual basis until 2011.

Second, PSE updated the load forecast to reflect the lower historical electric load per customer and customer counts that PSE experienced through March 2009. In other words, PSE re-calibrated the load forecast to a lower 2009 starting point of loads and customers.

PSE's third and final major change to the forecast was an increase of the programmatic conservation to reflect the higher energy efficiency acquisition targets that PSE included in the 2009 IRP. The impact of the larger programmatic conservation was to further lower the load forecast in future years.

Tables 1 and 2 below compare results from the F2008 and F2008R electric and gas forecasts.

Table 1 – Comparison of F2008 and F2008R Electric Load and Customer Forecasts

Energy	Data Type	Forecast	2009	2010	2011	2009 GRC Rate Year (4/10-3/11)
Electric	GPI (GWhs)	F2008	23,547	23,830	24,141	23,917
		F2008R	22,969	22,930	23,125	22,984
		% Diff	-2.5%	-3.8%	-4.2%	-3.9%
	Customers (1000s)	F2008	1,078	1,097	1,118	1,102
		F2008R	1,075	1,089	1,108	1,093
		% Diff	-0.3%	-0.7%	-0.9%	-0.8%

Table 2 – Comparison of F2008 and F2008R Gas Load and Customer Forecasts

Energy	Data Type	Forecast	2009	2010	2011	2009 GRC Rate Year (4/10-3/11)
Gas	Sendout (1,000,000 therms)	F2008	1,142	1,140	1,153	1,145
		F2008R	1,075	1,076	1,099	1,085
		% Diff	-5.9%	-5.6%	-4.7%	-5.3
	Customers (1000s)	F2008	755	775	797	781
		F2008R	749	762	782	767
		% Diff	-0.8%	-1.7	-1.9%	-1.8%

C. Performance of the F2008R Load Forecast and the F2008 Load Forecast Since Revision Was Completed

Q. Does PSE evaluate the performance of the load forecast?

A. Yes. Each month, PSE weather-normalizes the prior month's system total electric load (GPI) data using the weather-normalization coefficients. Please see the Prefiled Direct Testimony of Ms. Lorin I. Molander, Exhibit No. ____(LIM-1T), in this proceeding for additional details regarding PSE's current total electric system weather-normalization methodology.

PSE compares the weather-normalized system electric loads to the load forecast to check forecast accuracy. On a monthly basis, PSE also compares actual customer counts to forecast customer counts. PSE estimated the F2008R load forecast using historical data available through March 2009. Five months (April-August 2009) of actual data are now available with which to evaluate normalized loads and customer counts versus the forecast.

Q. Since completion of the new F2008R load forecast in March 2009, has it performed with more accuracy than the F2008 load forecast?

A. Yes. The comparison of weather-normalized actual loads to forecasts in Table 3 below demonstrates that the F2008R load forecast has a significantly lower degree of error than the F2008 load forecast. Between April and August 2009, normalized actual electric loads were 0.2% higher than the F2008R load forecast. Over the same period, normalized loads were 2.3% less than the F2008 load

forecast.

Table 3 – 2009 Actual, Weather-Normalized, and Forecast Electric Loads

Loads in GWh	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Apr-Aug Total
Actual GPI	2,431	2,068	2,209	1,832	1,711	1,621	1,777	1,698	8,640
Normalized GPI	2,357	2,041	2,092	1,811	1,714	1,611	1,732	1,700	8,568
F2008 GPI	2,389	2,076	2,111	1,855	1,767	1,669	1,730	1,745	8,767
F2008R GPI				1,810	1,724	1,628	1,687	1,703	8,551
% Diff Normal vs. F2008	-1.3%	-1.7%	-0.9%	-2.4%	-3.0%	-3.4%	0.1%	-2.6%	**-2.3%**
% Diff Normal vs. F2008R				0.1%	-0.6%	-1.0%	2.7%	**-0.1%**	**0.2%**

The comparison of the percentage difference between actual customer counts to each forecast in Table 4 below demonstrates that the F2008R customer forecast is also a more accurate forecast for the total number of customers.

Table 4 – 2009 Actual and Forecast Total Electric Customers

Customers (1000s)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Actual	1,070	1,071	1,072	1,073	1,073	1,073	1,073	1,073
F2008	1,071	1,072	1,073	1,075	1,076	1,077	1,079	1,080
F2008R	1,070	1,071	1,072	1,072	1,073	1,074	1,075	1,076
% Diff Actual vs. F2008	0.0%	-0.1%	-0.2%	-0.2%	-0.3%	-0.4%	-0.6%	-0.7%
% Diff Actual vs. F2008R				0.0%	-0.1%	-0.1%	-0.2%	-0.3%

III. REVISED PROJECTED COST OF LONG-TERM DEBT AND RATE OF RETURN

Q. Please describe PSE's most recent financing.

A. On September 11, 2009, PSE issued $350 million 5.757% Senior Secured Notes due 2039. PSE issued such notes under the existing shelf registration statement that became effective on March 13, 2009. PSE used the proceeds of this issuance to repay short-term debt outstanding under PSE's capital expenditure credit facility and to restore cash used to redeem the $150 million bond that matured in March 2009. PSE provided the Commission with notice of and materials related to this issuance in a filing made on September 3, 2009, in Docket No. UE-091407 and provided the final terms of the issue in a subsequent filing on September 11, 2009.

Q. Has PSE prepared a revised cost of capital exhibit to reflect these cost changes?

A. Yes. Please see Exhibit No. ___(DEG-10C), which is comparable to Exhibit No. ___(DEG-5C) but revised to reflect the new lower rates and the maturity date of this issue.

Q. Please describe the reason for this change.

A. When PSE filed Exhibit No. ___(DEG-5C), it included a $350 million issue assumed to be made in September 2009, have a ten (10) year maturity at a coupon of 6.90%, with a resulting cost rate of 7.04%. *See* Exhibit No. ___(DEG-5C), at

page 5, line 31, columns C and G, respectively. PSE did, in fact, issue $350 million of senior secured notes in September 2009, but such issuance has a thirty (30) year maturity and a coupon of 5.757%.

Q. How has PSE revised its projected cost of capital exhibit to reflect these cost changes?

A. In Exhibit No. ___(DEG-10C), PSE has replaced the assumed coupon of 6.90% with the actual coupon of 5.757%. *See* Exhibit No. ___(DEG-10C), at page 5, line 31, column C.

As stated above, PSE assumed in its original filing in this proceeding that the $350 million issue would be a 10-year bond, but PSE actually issued 30-year senior secured notes. Therefore, PSE has also changed the assumed maturity date of September 2019 to an actual maturity date of October 1, 2039. (*See* Exhibit No. ___(DEG-10C), page 5, line 31, column E). In addition to the change in coupon, the longer maturity helps reduce the cost rate on this issue from 7.04% to 5.83%.

Q. How does this change in the projected cost of long-term debt affect the rate of return?

A. When the lower cost of long-term debt is weighted by the long-term debt ratio, the weighted cost of debt declines—as does the resulting weighted average cost of capital or rate of return. As a result of the change in the cost of long-term debt, PSE's requested rate of return is now 8.50%, down from the requested rate of

return of 8.56% included in Exhibit No. ___(DEG-5C).

Q. Other than substituting the terms of the actual issuance of $350 million 5.757% Senior Secured Notes due 2039 for the terms of the assumed issuance of $350 million 6.90% Senior Secured Notes due 2019, has PSE made any other changes to its projected cost of long-term debt?

A. No.

Q. Has PSE revised its projected cost of long-term debt and its requested rate of return to reflect the terms of the above-described financing?

A. Yes. The above-described financing lowers (i) PSE's projected cost of long-term debt from 6.82% to 6.70%, and (ii) PSE's requested rate of return from 8.56% to 8.50%.

Q. Has PSE determined the impact on the revenue deficiency resulting from a requested rate of return of 8.50% rather than 8.56%?

A. Yes. Please see the Prefiled Supplemental Direct Testimony of Mr. John H. Story, Exhibit No. ___(JHS-9T), for the impact on the revenue deficiency resulting from a requested rate of return of 8.50% rather than 8.56%.

IV. CONCLUSION

Q. Please summarize your testimony.

A. The F2008R load forecast is PSE's most current load forecast and the one that PSE currently uses for energy hedging activities and power cost planning. PSE based the F2008R load forecast on more recent economic data and customer load results than that used in the F2008 load forecast. The more current data better reflect the current economic environment in which PSE is operating. When compared to weather-adjusted actual energy sales, the F2008R load forecast tracking error is much less than the tracking error of the F2008 load forecast.

On September 11, 2009, PSE issued $350 million of senior secured notes on terms better than those assumed by PSE for purposes of projecting the cost of long-term debt in its initial filing. As a result of the favorable terms of this issue, PSE now requests that rates in this proceeding be set on (i) a cost of long-term debt of 6.70% rather than 6.82% and (ii) a rate of return of 8.50% rather than 8.56%.

Q. Does this conclude your supplemental testimony?

A. Yes, it does.