

EXHIBIT NO. ____ (DWH-1T)
DOCKET NO. UE-07 ____
2007 PSE PCORC
WITNESS: DAVID W. HOFF

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

Docket No. UE-07 ____

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
DAVID W. HOFF
ON BEHALF OF PUGET SOUND ENERGY, INC.**

MARCH 20, 2007

PUGET SOUND ENERGY, INC.

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
DAVID W. HOFF**

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PUGET SOUND ENERGY, INC.

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
DAVID W. HOFF**

I. INTRODUCTION

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

A. My name is David W. Hoff and I am Manager, Pricing and Cost of Service with Puget Sound Energy, Inc. ("PSE"). My business address is 10885 NE 4th Street, Bellevue, Washington, 98004-5591.

Q. What are your responsibilities in your current position?

A. As Manager, Pricing and Cost of Service, my responsibilities include electric and gas rate spread and design, electric and gas cost of service studies and load research at PSE.

Q. Would you please provide a brief description of your educational and business experience?

A. Please see Exhibit No. ____ (DWH-2).

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1 **Q. What topics are you covering in your testimony?**

2 A. My testimony describes the change to customer tariffs attributable to the
3 adjustments to the Power Cost Rate. The total rate increase resulting from these
4 adjustments is \$64,680,804, an average 3.67% increase over the rates set in
5 January 2007. My testimony also presents the statement of proforma and
6 proposed revenue, which includes the temperature adjustment by applicable rate
7 schedule.

8 **II. RATE SPREAD AND DESIGN**

9 **Q. Please summarize how the proposed change to the Power Cost Rate will be**
10 **charged to customers.**

11 A. The Power Cost Adjustment Mechanism ("PCA") requires that changes in rates
12 attributable to adjustments to the Power Cost Rate as a result of a power cost only
13 review be charged to customers based upon the peak credit methodology utilized
14 in computing the rate spread methodology in PSE's most recent general rate case,
15 which is Docket Nos. UE-060266 and UG-060267 (the "2006 GRC"). *See*
16 Exhibit No. ____ (JHS-4) at ¶ 15.

17 PSE has applied the peak credit methodology utilized in the 2006 GRC to the
18 total deficiency in Power Costs shown on Exhibit No. ____ (JHS-7) at line 18 to
19 determine the amount of the power cost deficiency to be recovered from each rate
20 schedule. This allocation to rate schedules is shown in Exhibit No. ____ (DWH-3).

21 This power cost deficiency by rate schedule is then divided by test year proforma

1 kWhs for each rate schedule to calculate the amount to be charged to customers
2 for each rate schedule on a cents/kWh basis. This rate calculation is also shown
3 in Exhibit No. ____ (DWH-3).

4 **Q. Please describe the peak credit methodology utilized in the rate spread**
5 **methodology in the 2006 GRC.**

6 A. The peak credit methodology utilized in computing the rate spread methodology
7 in the 2006 GRC:

- 8 (i) classified 20% of generation and transmission costs on demand,
- 9 (ii) classified 80% of generation and transmission costs on energy,
- 10 (iii) allocated all demand costs (20% of generation and transmission
11 costs) to rate classes based on the contribution of the rate class to
12 the top 75 hours of system peak, and
- 13 (iv) allocated all energy costs (80% of generation and transmission
14 costs) to rate classes based on the contribution of the rate class to
15 total annual kWh sales.

16 This resulted in peak credit weighted allocation factors for each schedule, which
17 are shown in column (e) of Exhibit No. ____ (DWH-3). An example of the
18 calculation of such a factor follows: if the residential class represents 60% of the
19 top 75 hours of system peak and 50% of the annual kWh load, its peak credit
20 weighted allocation factor would be $(20\% \times 60\% + 80\% \times 50\%)$, or 52%. This
21 class would be allocated 52% of PCA costs.

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1 **Q. Please explain the history of the use of the peak-credit methodology for**
2 **allocating PCA costs.**

3 A. The first PCORC proceeding was Docket No. UE-031725 (the "2003 PCORC"),
4 and the rates in the 2003 PCORC became effective May 24, 2004. Those rates
5 were part of a settlement and were based upon the peak credit methodology
6 utilized in computing the rate spread methodology in the preceding general rate
7 case, Docket No. UE-011570. That methodology classified 16% of PCA costs on
8 demand and 84% of PCA costs on energy, and it allocated the demand costs to
9 rate classes based on their contribution to the top 200 hours of system peak.

10 The next PCORC proceeding was Docket No. UE-050870 (the "2005 PCORC").

11 The rates in the 2005 PCORC became effective November 1, 2005. These rates
12 were part of a settlement, and were based upon the peak credit methodology
13 utilized in computing the rate spread methodology in the Company's preceding
14 general rate case, Docket Nos. UE-040641, *et al.* (the "2004 GRC"). That
15 methodology classified 14% of PCA costs on demand and 86% of PCA costs on
16 energy, and it allocated the demand costs to rate classes based on their
17 contribution to the top 200 hours of system peak.

18 Under the terms of the settlement of the 2004 GRC, and the settlement of the
19 2005 PCORC, PSE was required to file a revised Schedule 95 effective July 1,
20 2006 reflecting an update of the Power Cost Baseline Rate. This filing, the
21 second compliance filing of the 2005 PCORC, was Docket No. UE-060783.

22 The rates in Docket No. UE-060783 were part of a settlement and based upon the

1 peak credit methodology utilized in computing the rate spread methodology in the
2 then-concurrent 2006 GRC. That methodology classified 20% of PCA costs on
3 demand and 80% of PCA costs on energy, and it allocated the demand costs to
4 rate classes based on contribution to the top 75 hours of system peak. The rate
5 spread proposed by the Company in the 2006 GRC and by the Company and the
6 parties in the rate design settlement in that docket was accepted by the
7 Commission. *See* Docket Nos. UE-060266 and UG-060267, Order 08 at ¶ 129.
8 The peak credit methodology utilized in computing the rate spread in the 2006
9 GRC was also used for allocating PCA costs in this filing.

10 **Q. Please describe Exhibit No. ____ (DWH- 3), entitled “Calculation of Schedule**
11 **95 Rate.”**

12 A. Exhibit No. ____ (DWH-3) presents the calculation of the Power Cost Adjustment
13 rate, Schedule 95, for each schedule. It describes and uses the calculation of the
14 weighted allocation factors used in the rate spread methodology in the 2006 GRC.
15 The calculation of the Power Cost Adjustment Clause rates, Schedule 95, then
16 uses those allocation factors to allocate the revenue deficiency to each customer
17 class. Finally, it calculates the Schedule 95 rates for each class by dividing the
18 allocated costs by the weather adjusted kWhs for each class for the test year. A
19 description of these calculations is included as the second page of the exhibit.

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1 **Q. Please describe Exhibit No. ____ (DWH-4), entitled “Statement of Proforma**
2 **and Proposed Revenues for Schedule 95.”**

3 A. Exhibit No. ____ (DWH-4) shows the proforma and proposed revenue under
4 current and proposed rates based on test period sales volumes and test period
5 billing determinants. On this exhibit, Column (a) shows the test year proforma
6 sales volumes for each schedule; Column (b) shows total test year proforma
7 revenue produced at current rates (effective January 13, 2007); and Column (c)
8 shows the cents/kWh attributable to adjustments to the Power Cost Rate to be
9 charged to customers on each of the applicable schedules. Total revenue under
10 the proposed rates is shown in Column (d), and the total increase in revenue due
11 to the proposed change in the Power Cost Rate is shown in Column (e). The
12 percentage impact of the proposed change on each of the applicable schedules is
13 shown in Column (f).

14 **III. TEMPERATURE ADJUSTMENT CALCULATIONS**

15 **Q. Has the test year proforma billed load in Exhibit No. ____ (DWH-3) and**
16 **Exhibit No. ____ (DHW-4) and the system level load in Exhibit No. ____ (JHS-7)**
17 **been adjusted for temperature ?**

18 A. Yes, the test year proforma billed load by schedule shown on each of Exhibit
19 No. ____ (DWH-3) and Exhibit No. ____ (DWH-4) and at the system level in Exhibit
20 No. ____ (JHS-5) have been adjusted for, and thus include, 42,569 MWh of

1 temperature adjustment.¹ The system MWh temperature adjustment in Exhibit
2 No. ____ (JHS-7) was calculated in total and allocated to each of the applicable
3 schedules by month based on the Company's temperature adjustment
4 methodology presented in the 2006 GRC. The Commission expressed
5 satisfaction with the Company's weather normalization analysis in that docket.
6 *See* Docket Nos. UE-060266 and UG-060267, Order 08, ¶ 163.

7 **Q. Please describe how the Company normalized the test year system level**
8 **delivered load in this case.**

9 A. As was done in the 2006 GRC, PSE used weather sensitivity coefficients based on
10 actual daily load data and actual Sea-Tac temperature to adjust system level
11 delivered load (Generated Purchased and Interchange, or GPI) for weather.
12 PSE's "normal" weather dataset was developed using data reported at Sea-Tac
13 International Airport over the 30-year period from 1976 through 2005 by
14 calculating daily heating degree days ("HDDs") and cooling degree days
15 ("CDDs") using several base temperatures (45 and 65 degrees for HDDs, 60 and
16 65 degrees for cooling). The actual HDDs and CDDs were calculated using the
17 average of the 24 hourly temperatures compared against the base temperature.
18 The amount of weather adjustment was calculated by taking the weather
19 sensitivity coefficients and multiplying it by the difference between the actual and
20 normal HDDs and CDDs. This process was done for each base HDD or CDD that
21 appeared in the model.

¹ Please see the workpapers of Mr. John H. Story for the total weather adjustment.

1 **Q. How did the Company use temperature normalized GPI electric load to**
2 **calculate the load adjustment that should be made to various customer**
3 **classes (rate schedules) related to weather effects?**

4 A. PSE used a three-step process to adjust rate schedules for temperature. The first
5 step was to develop linear regression equations to characterize the relationship
6 between temperature and load for each rate schedule. The coefficients of those
7 equations were permitted to vary by month and by class. The data source for this
8 step was a large sample of daily energy readings from PSE's automated meter
9 reading database. The second step was to simulate daily customer loads using the
10 historical heating and cooling degree days and determine the average monthly
11 load for each customer class. The third step was to weight the sample to the
12 population and normalize the class loads to the net-of-losses weather-normalized
13 GPI load. The amount of weather adjustment at the GPI level was allocated to
14 each of the applicable schedules by taking the percentage share of each schedule's
15 weather adjustment amount to total weather adjustment for all schedules as
16 calculated by the rate schedule normalization equations, and then multiplying the
17 system load temperature adjustment by these percentage shares.

18 **Q. What were the results of this process?**

19 A. Applying the process described above to the test year GPI load of 22,588,053
20 MWhs resulted in a total adjustment of 45,628 MWhs, or 42,569 MWh delivered
21 load when adjusted for losses. Because the test year was warmer than normal,
22 this adjustment resulted in a proforma delivered system load that is larger than

1 actual load delivered during the test year.

2 With regard to rate schedule normalization, when the GPI temperature adjustment
3 was allocated to the rate schedules the load of the residential schedule was
4 increased by approximately 62,000 MWhs while the loads of most other rate
5 schedules were decreased. This was due to the varying temperature pattern
6 experienced over the test year.

7 **Q. Has the Company prepared a revised Schedule 95 Power Cost Adjustment**
8 **Clause to reflect the proposed adjustments to the Power Cost Rate?**

9 A. Yes, a revised Schedule 95 Power Cost Adjustment Clause is presented in Exhibit
10 No. ____ (DWH-5). The revised Schedule 95 Power Cost Adjustment Clause
11 reflects the amount to be charged to customers on each of the applicable
12 schedules as calculated in Exhibit No. ____ (DWH-3).

13 **IV. CONCLUSION**

14 **Q. Does that conclude your testimony?**

15 A. Yes, it does.