

**EXHIBIT NO. ___(DWH-1T)
DOCKET NO. UE-09___/UG-09___
2009 PSE GENERAL RATE CASE
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-09___
Docket No. UG-09___**

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

MAY 8, 2009

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 and business address.

A. My name is David W. Hoff. I am manager, Pricing and Cost of Service with Puget Sound Energy, Inc. (“PSE” or the “Company”). My business address is 10885 NE Fourth Street, P.O. Box 97034, Bellevue, WA 98009-9734.

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

A. Yes, I have. It is Exhibit No. ____ (DWH-2).

Q. What is the purpose of your testimony?

A. My testimony presents the Company’s electric cost of service study and the Company’s proposed rate spread and rate design for electric service.

Q. Please summarize your testimony.

A. As with past cases, the Company continues to advocate for a rate spread proposal that aligns cost causation with cost recovery. The theoretical point where costs

1 assigned to a customer class equal the revenues collected from that customer class
2 (once all classes are adjusted for system over or under recovery) is called
3 “parity,” and the parity percentage at this point is 100%. The electric cost of
4 service results in this case indicate that there are no major customer classes that
5 are significantly (more than 5%) below parity,¹ but there are several classes
6 significantly (greater than 5%) above parity. The Company acknowledges that
7 the determination of parity is not absolute and that parity is dependent on the
8 methodology used to allocate joint costs. As a result, the Company’s proposal in
9 this case, while increasing rates for some classes more than others, does not
10 rigidly move each class to parity.

11 Regarding electric rate design, the Company does not propose any change in this
12 filing. In general, all rates within a customer class have been increased by the
13 class percentage, with the exception of the choice/retail wheeling and campus rate
14 classes. As a result, the proposed rates will increase the monthly bill of virtually
15 every customer within a class by the same percentage, regardless of season or
16 usage. Rates for the choice/retail wheeling and campus rate classes were set in
17 accordance with the Multiparty Settlement Agreement approved by the
18 Commission in Docket No. U-072375.

¹ Customer classes that are below 5% parity are Campus Rate and Firm Resale/Special Contracts.

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II. ELECTRIC COST OF SERVICE

A. Background Regarding Electric Cost of Service Studies

Q. Please summarize the purpose of a cost of service study.

A. A cost of service study is used to identify the costs that are incurred to serve a particular customer class. Identifying the cost responsibility of each class requires an analysis of the Company's costs and then an allocation of those costs to each customer class. This allocation is done by first directly assigning to a customer class any costs determined to be caused by that class alone. Joint costs that are shared by multiple customer classes are then allocated to various classes on a pro rata basis, based on factors appropriate to the costs being allocated.

The ultimate objective of the cost allocation process is to create a just, fair, reasonable and sufficient allocation of costs to different customer classes. This cost of service information is then used to allocate the revenue requirement determined in a rate case to the different customer classes. Historically, the Commission has treated the cost of service study as a guidepost for the allocation of the revenue requirement and has eschewed a mechanical application of the cost of service study.

In order to provide the benefits of cost analysis to individual customers in addition to customer classes, the cost of service study also serves as a guide for the rate design process. For example, the basic charge has historically been

1 based, in part, upon customer costs determined in the cost study. Similarly,
2 demand charges have historically been guided by demand costs determined in the
3 cost study.

4 **Q. Please summarize the process for preparing the electric cost of service study.**

5 A. The cost of service study starts with the electric revenue requirement that is set
6 forth in the Prefiled Direct Testimony of John Story, Exhibit No. ___(JHS-1T),
7 which represents the Company's costs to provide service to its electric customers.

8 The first step of this study is to separate these costs into the major electric utility
9 functions: generation, transmission, and distribution. This process is referred to
10 as functionalization of costs.

11 The second step is to further divide the costs associated with each of the major
12 functions into customer, demand and energy components (which are explained
13 below). This process is referred to as classification.

14 The third step is to allocate each of the cost components to the individual rate
15 classes.

16 **Q. What are customer, demand, and energy costs?**

17 A. Customer-related costs are incurred to connect a customer to the electric
18 distribution system and include costs for meters and meter reading, billing, and
19 customer service. Customer costs are a function of the number of customers

1 served and are incurred whether or not the customer uses any electricity.

2 Demand-related costs are those costs associated with electric plant that is
3 designed, installed and operated to meet maximum hourly or daily electric
4 capacity requirements, such as transmission and distribution cables and related
5 structures or portions of generation units that are needed to meet peak demands.

6 While these structures or units may not be fully utilized at all times, they must be
7 designed and installed to meet the maximum load that is anticipated.

8 Energy related costs are those costs that vary with the amount of electricity sold
9 to, or transported for, customers. Costs related to electric supply are classified as
10 energy related to the extent they vary with the amount of electricity purchased or
11 generated by the utility for its electric sales customers.

12 One of the challenges of classifying costs into demand, energy, and customer
13 components is that some utility equipment is commonly considered to serve
14 multiple functions. For example, generation equipment is widely recognized as
15 having both demand and energy components.

16 **Q. Please identify all electric cost of service studies conducted by the Company**
17 **in the last five years.**

18 A. In addition to the electric cost of service study conducted in this case, the
19 Company conducted fully allocated embedded cost of service studies to support
20 general rate case filings in 2004, 2006 and 2007 (Docket Numbers UE-040641,

1 UE-060266 and UE-072300).² In the 2004 and 2006 general rate cases (“GRC”),
2 two separate studies were filed.

3 **Q. Please describe the methodology used in those studies.**

4 A. Each of the cost of service studies referenced above used the same basic
5 methodology for functionalization of costs. However, there are some differences
6 in how the studies classified and allocated costs. For instance, one version of the
7 cost of service studies prepared for both the Company’s 2004 and 2006 general
8 rate cases relied on cost classification and allocation factors used in the prior
9 litigated electric cost of service study in Docket Nos. UE-920433, UE-920499
10 and UE-921262 (“1992 Cost of Service Study”) without any significant
11 modification to how the calculation was performed. A second version of the cost
12 of service studies prepared for the Company’s 2004 and 2006 general rate cases
13 used the same approach but modified the calculation of the cost classification and
14 allocation factors in order to reflect (1) changes in PSE’s generation and delivery
15 system since 1992, and (2) access to more detailed data to provide a more
16 accurate allocation of costs. The latter version was also used in PSE’s 2007 GRC.

17 **Q. What were the changes and modifications adopted in the Company’s 2006**
18 **GRC and used in the Company’s 2007 GRC filing?**

²Also, the Company used cost allocation studies to set rates in power cost only rate cases (“PCORC”) in Docket Nos. UE-031725, UE-050870 and UE-070565. However, in each of the PCORC proceedings the Company relied on the power cost allocation factors from the cost of service study conducted in the rate cases that immediately preceded the PCORC proceeding.

1 A. The 2006 GRC implemented the following updates and modifications to the
2 Company's methodology:

- 3 • modifications of the approach used to classify generation costs into
4 demand and energy components,
- 5 • modification of the approach used to classify transmission costs into
6 demand and energy components,
- 7 • allocation of distribution substation and line costs relative to each class's
8 share of the load on these specific facilities,
- 9 • direct allocation of line transformer costs to each of the customer rate
10 classes, and
- 11 • classification of the transformer cost as customer-related rather than
12 demand related.

13 All issues regarding cost of service, rate spread and rate design were settled in
14 that case, and all parties agreed to allocate any rate increase that the Company had
15 in proportion to the Company's proposed rate spread, which was based on the
16 Company's cost of service analysis. These modifications were then adopted by
17 the Company for the 2007 general rate case, which was also settled.

18 **Q. Regarding specific elements of the cost of service analysis, what updates have**
19 **been made to the cost classification factors in the last five years?**

20 In each filing energy production and transmission costs have been classified as
21 demand and energy related using the peak credit method. In each filing the peak
22 credit factor has been modified to reflect current planning assumptions. The
23 history of these modifications and the update for this filing is discussed in the
24 Prefiled Direct Testimony of Jon Piliaris, Exhibit No.____(JAP-1T). In addition,

1 the Company classifies line transformer costs as customer related, as first
2 proposed and adopted in PSE's 2006 GRC.

3 **Q. What updates have been made to the factors used to allocate generation and**
4 **transmission costs among rate classes in the last five years?**

5 A. Two significant updates have been made. First, one new rate class has been
6 added: the Campus Rate. This rate is Schedule 40 (Large Demand General
7 Service Greater than 3 aMW). Second, beginning with PSE's 2006 GRC, the
8 demand component of generation and transmission costs has been allocated to
9 each rate class based upon each class's contribution to the highest 75 hourly
10 system loads, rather than the highest 200 hourly loads.

11 **Q. What updates has the Company made in this proceeding to the factors used**
12 **to allocate distribution costs among rate classes in the last five years?**

13 A. As I describe later in my testimony, the Company has allocated distribution costs
14 based upon each class's contribution to the distribution circuit and distribution
15 substation non-coincident peak ("NCP"). More specifically, the distribution
16 circuit cost allocations at the feeder level are weighted to a total system allocation
17 based upon distribution circuit miles. This alternative is used in place of the
18 distribution allocation factors used previously in which the cost allocation was
19 based upon an estimate of each class's system aggregate NCP. Another
20 difference, also used in the past several proceedings and also described later, is

1 that the allocation of the cost of line transformers relies on a direct allocation,
2 rather than on an aggregate class level contribution to the NCP. Customers on the
3 Campus Rate are directly assigned all the distribution plant costs.

4 **B. Overview of the Company's Electric Cost of Service Study**

5 **Q. Does the Company's cost of service study in this proceeding utilize the**
6 **methodology for classification and allocation of electric costs that PSE used**
7 **in its 2007 GRC?**

8 A. Yes. All issues regarding cost of service, rate spread and rate design were
9 resolved through settlement in PSE's 2006 GRC, and all parties agreed to allocate
10 any rate increase that the Company had in proportion to the Company's proposed
11 rate spread, which was based on the Company's cost of service analysis. PSE
12 used the same cost of service methodology in its 2007 GRC, which was also
13 settled by agreement of all parties. The cost of service study in this case utilizes
14 the same methodology as PSE used in its last two GRCs. This methodology is
15 discussed in more detail in sections C through H, below.

16 **Q. What are the results of the Company's cost of service study?**

17 A. The parity percentages by customer class that result from the cost of service study
18 are shown in the following table. Parity reflects the relative relationship between
19 revenues currently recovered in rates to the revenue required based upon the cost
20 of service analysis. Parity over 100% indicates that the customer class is

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currently paying more than its share of allocated costs (once all classes are adjusted for system over or under recovery).

Customer Class	Rate Schedule	Parity Percentage
Residential	7	95%
General Service, < 51 kW	24	107%
General Service, 51 – 350 kW	25	112%
General Service, >350 kW	26	105%
Primary Service	31/35/43	109%
Campus Rate	40	89%
High Voltage	46/49	98%
Lighting Service	51 - 59	109%
Choice/Retail Wheeling	448/449	94%
Firm Resale/Special Contract	5	88%
System Total / Average		100%

Q. Was the model used to develop the cost of service study the same model used in the Company’s most recent general rate case?

A. Yes. The model used for this study is the same model used in the last two general rate cases.

C. Classification of Production Costs

Q. Please describe how generation costs were classified into energy and demand components in the Company’s cost of service study.

A. The Company utilized the “peak-credit” methodology to divide generation costs into demand and energy components. Based on the Company’s application of this

1 methodology, the percent of production cost classified as demand is 21%, with
2 79% classified as energy. The derivation of these percentages and an explanation
3 of the peak credit method used by the Company is provided in Mr. Piliaris's
4 Prefiled Direct Testimony, Exhibit No. ____ (JAP-1T).

5 **D. Classification of Transmission Costs**

6 **Q. How are transmission costs classified in the Company's cost of service study?**

7 A. The Company is using the peak credit method, described above, to classify
8 transmission costs. Using the peak credit method, 21% of transmission costs are
9 classified as demand and 79% are classified as energy. These factors are also
10 applied to high voltage distribution, which is the sub-230 kV plant that was
11 classified as transmission prior to reclassification in Docket No. UE-010010.

12 **Q. Does the Company distinguish between generation-integration transmission**
13 **and other transmission?**

14 A. Yes. Generation-integration transmission brings PSE's remote generation to
15 PSE's integrated transmission system.³ One must segregate the costs of
16 generation-integration transmission from other transmission because retail rate

³ The costs of generation-integration transmission generally consist of PSE's transmission costs related to (i) facilities in Montana acquired in connection with the Colstrip generating facilities (ii) the 3rd AC Intertie, (iii) the Northern Intertie, (iv) Wild Horse, (v) Hopkins Ridge, (vi) Frederickson, and (vii) Goldendale, as well as costs related to integrating the Mint Farm facility that are not included in the Mint Farm production costs.

1 Schedules 448 and 449, as well as the large customer in the Firm Resale/Special
2 Contract class, do not use PSE's remote generation resources. Thus, it is
3 appropriate to exclude these customers from the allocation of costs for
4 transmission lines used for integration of remote resources. However, these
5 classes continue to receive an allocation of PSE's other transmission costs.

6 **E. Classification of Distribution Costs**

7 **Q. How are distribution costs classified in the Company's cost of service study?**

8 A. With three exceptions, all distribution costs are classified as demand related. The
9 three exceptions are the costs of meters, service lines and distribution line
10 transformers. These are classified as customer related and are discussed in
11 Sections G(2) and G(3).

12 **F. Allocation of Generation and Transmission Demand Costs**

13 **Q. How are generation and transmission demand costs allocated in the cost of**
14 **service study?**

15 A. The Company uses estimated peak demands at 23°F to determine peak generation
16 requirements for a temperature normal year in its Integrated Resource Plan. The
17 Company reviewed hourly temperature data over the last 14 years and determined
18 that the largest number of hours in any one year that the hourly temperature was
19 23°F or colder was 75 hours. Therefore, as in the past two GRCs, the Company is
20 allocating generation and transmission demand costs based on an average of

1 hourly class loads that occurred coincident with the top 75 system hours during
2 the test year.

3 **G. Allocation of Distribution Costs**

4 **1. Distribution Substations and Feeder Costs**

5 **Q. How did the Company allocate distribution substations and feeder costs in its**
6 **cost of service study?**

7 A. The Company assigned the cost of distribution underground circuits, overhead
8 circuits, and substations based upon allocation factors constructed from each
9 class's contribution to feeder and substation peak loads and the length of the
10 distribution circuit. These allocation factors were constructed from monthly
11 energy and load factors for the twelve-month period ending December 2008.

12 **Q. Would you please describe specifically how substation costs were allocated?**

13 A. For each month, each customer class's contribution to the peaks, as a percent of
14 those peaks, of individual distribution substations was calculated using the
15 average hourly consumption of each class's load on the substation, divided by the
16 non-coincident peak ("NCP") load factor of that class in that month. Each class's
17 contribution to the peak load on each individual substation was then averaged
18 across the months of the year. This average monthly contribution to each
19 substation's peak load was then multiplied by the booked cost of the individual

1 substation in 2008 dollars to derive the allocated cost of each substation. These
2 allocated substation costs were then summed by customer class and compared
3 with the Company's total substation investment in 2008 dollars to develop the
4 substation cost allocations for FERC Accounts 360-362.

5 **Q. How did PSE allocate distribution line costs?**

6 A. The Company used its customer and distribution feeder databases to associate
7 each customer with a feeder. Monthly NCP load factors were then used for each
8 customer class to determine each class's contribution to each feeder's monthly
9 NCP as a percent of each month's peaks. Each class's contribution to monthly
10 peak load was multiplied by the number of overhead and underground miles on
11 the feeder. These load-weighted line miles were then added across all the feeders
12 to develop the total load-weighted overhead and underground distribution line
13 miles allocated to each class. Allocation factors for overhead and underground
14 lines were then developed by dividing the total load-weighted line miles
15 attributable to each class by the total load-weighted line miles for all classes. The
16 overhead allocators were applied to FERC Accounts 364 and 365, and the
17 underground allocators were applied to FERC Accounts 366 and 367.

18 **Q. Why has PSE incorporated miles of distribution lines into the cost**
19 **allocation?**

20 A. The cost of building overhead or underground distribution lines is primarily a

1 function of distance, with cost adjustments for capacity. Cost is driven by the
2 number of miles of trench excavated, miles of conductor required, number of
3 poles installed, etc. There is an incremental cost for load, but it is relatively
4 small, particularly because the Company uses only a few standard wire sizes for
5 overhead and underground feeders and taps in order to reduce ordering,
6 inventory, and record-keeping costs.

7 **2. Distribution Line Transformer Costs**

8 **Q. Please describe how the Company classifies and allocates line transformer**
9 **costs in its cost of service analysis.**

10 A. As in PSE's previous two cases, line transformers are classified as a customer
11 cost because line transformers are installed specifically to serve a particular
12 customer or group of customers. Once installed, the transformer represents a
13 fixed cost of providing service to the customer or group of customers. For
14 example, in the typical residential subdivision developments being constructed
15 today, the Company installs a 37.5 kVA pad-mounted transformer for every
16 twelve homes.

17 **Q. Are the transformer costs the same for each customer?**

18 A. No. Transformer costs vary due to density of customers, and for large load
19 customers the transformer is sized for the anticipated load. However, once a
20 transformer is placed in service, it is normally there for the life of the transformer.

1 The Company uses standard transformer sizes in order to reduce ordering,
2 inventory and record keeping costs.

3 In summary, transformer sizes are standardized, transformers are sized to serve a
4 particular customer or group of customers, and transformers are rarely re-sized for
5 a particular customer or a group of customers. Therefore, transformer costs are
6 appropriately characterized as customer related costs as opposed to demand
7 related costs.

8 **Q. Is it appropriate to classify a piece of utility equipment as customer-related**
9 **even though it serves multiple customers?**

10 A. Yes. The appropriateness of the classification depends on the function the
11 equipment serves, not the number of customers served. There are many examples
12 of costs that are universally accepted as customer costs that serve many
13 customers, such as the costs of billing systems and meter reading systems. The
14 test is not whether the cost is dedicated to a single customer or a group of
15 customers, but whether the cost is best characterized as varying with the number
16 of customers, the customers' demands or the customers' usage.

17 **Q. Please describe how the line transformer cost allocation factor was**
18 **developed.**

19 A. The Company used its customer database to associate each line transformer with
20 the customers using the transformer. This resulted in allocating approximately

1 250,500 transformers to the different classes by type and size. Approximately
2 91% of the line transformers are used by a single class and thus were directly
3 assigned. The remaining transformers were assigned to each class based upon the
4 class's relative contribution to the transformer's load. The transformers were
5 priced at current costs, including installation, to determine each class's
6 contribution to embedded line transformer costs (FERC Account 368). The
7 embedded line transformer costs in the FERC account reflect the Company's line
8 extension policy and have been reduced by an allocated amount of customer
9 contributions.

10 **3. Service Line and Meter Costs**

11 **Q. How were service line and meter costs allocated in the Company's cost**
12 **study?**

13 A. Service line costs were allocated based on the number of customers taking service
14 at secondary voltage. Costs of all underground service lines were assigned to the
15 residential class because non-residential secondary voltage customers own their
16 underground services. Costs of overhead service lines were allocated based on
17 the number of secondary voltage overhead service customers in each class.
18 Meters were allocated based on the current cost of meters assigned to customers
19 in each class.

20 **H. Administrative and General Costs and Other Cost Allocation Factors**

1 **Q. How did PSE allocate administrative and general costs?**

2 A. The majority of administrative and general costs were assigned based upon
3 adjusted production, transmission, distribution, and customer costs. Property
4 insurance allocations were based upon allocated plant, and pensions and
5 employee insurance followed the allocation of salary and wages.

6 **Q. What other cost allocations did PSE use in its cost of service study?**

7 A. The Company reviewed historical experience with late payments and assigned the
8 costs to each class. Other miscellaneous revenues associated with non-sufficient
9 fund checks and reconnects are allocated to each class based upon a historical
10 analysis of revenues received from these sources.

11 **Q. Has the Company provided a summary of its electric cost of service study in
12 this proceeding?**

13 A. Yes. The Company's proposed electric cost of service study is summarized in the
14 Second Exhibit to my Prefiled Direct Testimony, Exhibit No. ___(DWH-3).

15 **III. ELECTRIC RATE SPREAD PROPOSAL**

16 **Q. Would you briefly describe rate spread and its relationship to cost of service?**

17 A. Rate spread is the process of determining what portion of the total revenue
18 requirement should be allocated to each customer class for recovery in that class's

1 rates. Rate spread is guided by the results of the cost of service study.

2 **Q. What rate spread policy factors did the Company consider in developing its**
3 **electric rate spread recommendation?**

4 A. The Company's proposal emphasizes two factors: the customer class relationship
5 to parity and customer impacts. The Company's proposal is influenced by the
6 results of the cost of service study and continues movement towards parity. But
7 the Company is also concerned about the relative impact on different classes of
8 customers.

9 **Q. Would you please summarize the Company's proposed rate spread?**

10 A. Based upon the parity percentages shown in the Company's cost of service study
11 and the desire to move towards full parity (a parity percentage of 100%) in a
12 gradual manner, the Company proposes to 1) apply, with one exception, an
13 adjusted average rate increase to retail classes within 5% of full parity; 2) apply a
14 rate increase that is 75% of the adjusted average to the three classes that are more
15 than 5% but less than 10% above full parity (General Service less than 51 kW,
16 Primary Service, and Lighting); and 3) apply an increase that is 50% of the
17 average to the one class that is 10% or more above full parity (General Service,
18 51 – 350 kW). No retail class will receive a rate increase greater than the
19 adjusted average rate because in this study there are no classes that fall below the
20 parity percentage band of 95% - 105%.

1 The one exception mentioned above is Choice/Retail Wheeling (schedules
2 448/449). The parity percentage for this class is 94.46%, barely outside the band
3 of plus or minus 5%. Because it is so close to being within the band, PSE
4 proposes that this class receive the average increase.

5 As discussed below, rates in Schedule 40 (Large Demand General Service Greater
6 than 3 aMW) are tied to rates in the high voltage schedules, such that the rate
7 increase for that schedule is not independently determined.

8 The Wholesale for Resale/Contract class is allocated an amount that would move
9 it to full parity so that there is not a cross-jurisdictional subsidy.

10 The adjusted average rate increase is the average rate increase after accounting for
11 the effect of less than average increases to certain classes. Since there are no
12 classes that receive a greater than adjusted average increase, the adjusted average
13 increase of 8.37% is greater than the Company average retail increase of 7.40%.

14 As in PSE's last rate case and consistent with the Merger Agreement approved in
15 Docket No. U-072375, the Company proposes to spread a proportion of the rate
16 increase to Schedule 40 based upon the tariff design developed in its 2004 GRC.
17 This design links the Schedule 40 production and transmission charges to those
18 found in the High Voltage schedule and establishes a distribution charge based on
19 customer-specific information. This results in a calculated rate spread amount for
20 this class, rather than a rate spread based on class specific cost of service and rate
21 spread analysis.

1 A summary of the Company's proposed rate spread is provided below. Please
 2 also see the Third Exhibit to my Prefiled Direct Testimony, Exhibit
 3 No. ___(DWH-4), for a detailed worksheet of PSE's rate spread proposal.

Customer Class	Rate Schedule	Parity Percentage	Proposed Rate Increase
Residential	7	95%	8.37%
General Service, < 51 kW	24	107%	6.28%
General Service, 51 - 350 kW	25	112%	4.19%
General Service, >350 kW	26	105%	8.37%
Primary Service	31/35/43	109%	6.28%
Campus Rate*	40	89%	8.68%
High Voltage	46/49	98%	8.37%
Lighting Service	51 - 59	109%	6.28%
Choice/Retail Wheeling	448/449	94%	8.37%
Total Jurisdictional Retail Sales	n/a	n/a	7.40%
Firm Resale/Special Contract	5	88%	22.35%**
System Total/Average		100%	7.41%

*Campus Rate increase proposal reflects customer-specific distribution rates according to agreement.
 **Reflects allocation of portion of system rate increase to non-jurisdictional rates.

1 **IV. ELECTRIC RATE DESIGN**

2 **Q. What rate design principles guided you in your rate development?**

3 A. Rates should: (1) provide for recovery of the total revenue requirement; (2)
4 provide revenue stability and predictability to the utility; (3) provide rate stability
5 and predictability to the customer; (4) reflect the cost of providing service; (5) be
6 fair; (6) send proper price signals; and (7) be simple and understandable. These
7 principles are consistent with those presented in “Principles of Public Utility
8 Rates,” by James C. Bonbright, Albert L. Danielsen and David R. Kamerschen,
9 2nd Edition, 1988.

10 **Q. Please summarize the changes the Company proposes to make to electric rate**
11 **design.**

12 A. The Company is not proposing any changes in this case to the design of existing
13 rates. With only minor exceptions, all rates in a customer class will be increased
14 by the class average percentage increase. The exceptions are Schedule 25, where
15 the demand rate is tied to Schedule 31; Schedule 40, where, according to
16 agreement, customer specific distribution rates are charged; and Schedules
17 448/449, where, according to agreement, the methodology of PSE’s 2007 GRC
18 was used and the rate increase applied on an equal dollar per kVA basis rather
19 than equal percentage.

20 **Q. Has the Company prepared new tariff schedules based upon the cost of**

1 **service study results and consistent with its rate design proposals in this**
2 **case?**

3 A. Yes, the proposed tariff schedules are presented in the Fifth Exhibit to my
4 Prefiled Direct Testimony, Exhibit No. ___(DWH-6).

5 **A. Summary of Residential Rate Design**

6 **Q. Please summarize the Company's proposed residential rate design.**

7 A. The current rate is a two-block energy rate with a monthly basic charge (single
8 phase) of \$7.00, a first block rate of 8.4233 ¢/kWh, and a second block rate of
9 10.2042 ¢/kWh. The Company proposes to increase all three charges by the class
10 percentage of 8.37%, adjusted for rounding. This results in a proposed basic
11 charge (single phase) of \$7.59 a month, a first block rate of 9.1275 ¢/kWh and a
12 second block rate of 11.0584 ¢/kWh.

13 **Q. How does PSE's proposed residential basic charge compare with basic**
14 **charges of other utilities?**

15 A. I reviewed the basic charges of national and local investor-owned electric utilities
16 and government and customer-owned utilities in Washington state that are close
17 to PSE's service territory. The 223 basic charges of national electric utilities
18 average \$7.63 a month, almost exactly the amount proposed in this filing. Of the
19 25 Washington state electric utilities surveyed, seventeen have residential basic
20 charges that are higher than \$7.59 a month, and the average basic charge for all

1 26 utilities (including PSE) is \$10.33. These basic charges are shown in the
2 Fourth Exhibit to my Prefiled Direct Testimony, Exhibit No. ___(DWH-5).

3 **Q. What are the bill impacts of your proposed increase in residential rates?**

4 A. Please see the Prefiled Direct Testimony of Lorin Molander, Exhibit
5 No. ___(LIM-1T), for a discussion of the bill impacts of the Company's proposal
6 to residential rates.

7 **B. Summary of Small and Medium General Service Rate Design**

8 **Q. Please summarize the proposed rate design for small load general service.**

9 A. The Small Load General Service (Rate Schedule 24) class is not demand metered
10 and has a single block seasonal rate. The Company's proposal is to increase all
11 rates, including the basic charge, by the class average increase.

12 **Q. Please summarize the proposed rate design for medium load general service.**

13 A. The Small Demand General Service (Rate Schedule 25) class has a basic charge
14 rate, two block seasonal energy rates and a two-block seasonal demand rate. The
15 first 50 kW block has no demand charge and the demand-related costs are
16 recovered in the first block of the energy rate. Under the Company's proposal, all
17 Schedule 25 rates are increased by roughly the same percentage, the class average
18 increase.

1 **C. Summary of Large General Service Rate Design: Schedules 26 and 31**

2 **Q. Please summarize the proposed large general service rate design.**

3 A. There are two rates in this group: Large Secondary (Rate Schedule 26) and
4 Primary General Service (Rate Schedule 31). The demand rates of the two
5 schedules are linked such that the lower rate for Schedule 31 reflects both the cost
6 savings to the Company of not providing primary voltage transformation service
7 and a discount for Schedule 31 energy and demand based on lower transformer
8 losses (since Schedule 31 meters are located on the high side of the line
9 transformer). The energy rates are not directly linked due to differences in parity
10 percentages for the two schedules.

11 **Q. Why does the Company link the demand rates of the two schedules?**

12 A. For a number of years the Company has been moving these two rate schedules
13 towards comparable rates because the loads and load factors are comparable. The
14 drive towards a cost-based differential between the two rates schedules is to
15 create an end-point where customer motivation to take primary service will be
16 based upon customer needs rather than a desire to qualify for the schedule with
17 the lower rate.

18 **Q. Please describe the proposed Schedule 26 and Schedule 31 rate designs.**

19 A. PSE increased all Schedule 31 rates by the class average increase. Due to the
20 class parity percentage, this class average increase is 75% of the adjusted average

1 for all classes. PSE increased the Schedule 26 basic charge by the class average,
2 which is 100% of the adjusted average for all classes. The reactive power charge
3 for each schedule was increased by the class average increase for that schedule.
4 The Schedule 26 demand charges were then set equal to the Schedule 31 demand
5 charges on a loss adjusted basis. PSE then increased the Schedule 26 energy rate
6 by an amount that will recover the remainder of the rate responsibility of the
7 Schedule 26 rate class.

8 Because of the demand rate linkage, the percentage increase in demand rates for
9 Schedule 26 will differ from the percentage increase in energy rates for that
10 schedule. As a result, not all customers in the Schedule 26 class will see the exact
11 same percentage increase in their monthly bills.

12 **D. Campus Rates: Schedule 40**

13 **Q. Please describe the purpose of Schedule 40.**

14 A. This rate, Large Demand General Service Greater than 3 aMW, was developed in
15 PSE's 2004 GRC in response to customers with large loads that are either
16 typically in a campus configuration or share a distribution feeder with other
17 customers. The rate first became effective on March 17, 2005 and was voluntary
18 until the GRC following the third anniversary of that date, which is this
19 proceeding. The rate requires a cost study to be performed by the Company to
20 establish a customer-specific distribution charge, and customers can only be
21 added in a GRC.

1 **Q. Has the Company identified any customers that should be added to**
2 **Schedule 40 in this case?**

3 A. Yes. As noted above, Schedule 40 is now mandatory once a qualifying customer
4 has been identified and approved for Schedule 40 service in a general rate case.
5 There is one additional customer who now qualifies for this rate. This customer
6 has been included in Schedule 40.

7 **Q. Please summarize the rate design for Schedule 40.**

8 A. Rates for Schedule 40 are calculated using the current calculated rate
9 methodology, as required under Paragraph 61 of Appendix A of the Multiparty
10 Settlement Agreement approved by the Commission in the Company's merger
11 proceeding, Docket No. U-072375. Schedule 40 has customer-specific
12 distribution rates and a bundled energy and transmission rate that is based upon
13 Schedule 49 after an adjustment for losses. The distribution rate is designed to
14 recover customer-specific distribution costs on a levelized basis. The bundled
15 production and transmission energy and demand rates are linked to the parity-
16 adjusted high voltage rates because the aggregated load of each of these
17 customers is comparable to the load of high voltage customers.

18 The Company reviewed the distribution rates of the customers and adjusted their
19 distribution costs, transformer costs, and substation costs based on plant additions
20 and retirements that have occurred since the Company's 2007 GRC.

1 As stated earlier in my testimony, there is one additional customer who now
2 qualifies for Schedule 40, and this customer has been included in Schedule 40.

3 **E. Summary of High Voltage Rate Design**

4 **Q. Please summarize the high voltage rate design.**

5 A. All rates for the full requirements non-interruptible high voltage customers
6 (Schedule 49) and the interruptible high voltage customers (Schedule 46) were
7 increased by the class average increase.

8 All rates for the Power Supplier Choice and Retail Wheeling Rates (Schedules
9 448 and 449) were increased using the same methodology used in PSE's 2007
10 GRC, pursuant to Paragraph 60 of Appendix A of the Multiparty Settlement
11 Agreement, approved by the Commission in the Company's merger case, Docket
12 No. U-072375. Under such methodology, the basic charge is set at its cost of
13 service, and the allocated amount remaining is recovered on an equal dollars per
14 kVA basis.

15 **V. ADJUSTMENTS TO LOAD**

16 **Q. Does the Company's electric cost of service and rate design incorporate any**
17 **adjustments to loads made in this case?**

18 A. Yes. The cost of service reflects weather normalization of power costs and the
19 rate design reflects weather normalization of test year loads (and billing

1 determinants). Based upon the implementation of the Company's weather
2 normalization methodology, 88% of the kWh weather adjustment was applied to
3 the residential class. These weather normalization adjustments are discussed in
4 Ms. Molander's Prefiled Direct Testimony, Exhibit No. ____ (LIM-1T), and Mr.
5 Story's Prefiled Direct Testimony, Exhibit No. ____ (JHS-1T). In addition, the
6 cost of service and rate design reflect the adjustment to test year loads (and billing
7 determinants) for the phasing in of Company-funded conservation programs
8 during the test year. The conservation phase-in adjustment is discussed by Mr.
9 Piliaris in his Prefiled Direct Testimony, Exhibit No. ____ (JAP-1T).

10 **VI. CONCLUSION**

11 **Q. Does this conclude your testimony?**

12 **A. Yes.**