

**Exhibit No. TES-1T
Docket UE-090704/UG-090705
Witness: Thomas E. Schooley**

**BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

DOCKET UE-090704/UG-090705

TESTIMONY OF

THOMAS E. SCHOOLEY

**STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

***Revenue Requirement Adjustments 10.02 and 9.02, General Revenues, and
Adjustments 10.23 and 9.16, Property and Liability Insurance;
Cost of Service; Revenue Allocation; Rate Design***

November 17, 2009

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1 I. INTRODUCTION

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Q. Please state your name and business address.

A. My name is Thomas E. Schooley. My business address is The Richard Hemstad Building, 1300 South Evergreen Park Drive SW, Olympia, Washington, 98504-7250. My email address is tschoole@utc.wa.gov.

Q. By whom are you employed and in what capacity?

A. I am employed by the Washington Utilities and Transportation Commission (“Commission”) as the Accounting Manager in the Energy Section.

Q. How long have you been employed by the Commission?

A. I have been employed by the Commission since September 1991.

Q. Please describe your relevant background and professional qualifications?

A. I received a Bachelor of Science degree from Central Washington University in 1986. I met the requirements for a double major in Accounting and Business Administration-Finance. Additionally, I have a Bachelor of Science degree in geology from the University of Michigan. I passed the Certified Public Accountant exam in May 1989. Since joining the Commission, I have attended several regulatory accounting courses, including the summer session of the Institute of Public Utilities.

I testified in Docket UE-960195 involving the merger of Washington Natural Gas Company and Puget Sound Power & Light Company. I was the lead Staff analyst in

1 several applications for accounting treatment, including Puget Sound Energy, Inc. (“PSE”
2 or “the Company”) Dockets UE-971619 and UE-991918. I testified in the Avista general
3 rate case, Docket UE-991606, and Avista energy recovery mechanism proceedings,
4 Dockets UE-000972, UE-010395, UE-011595, and UE-030751. I also assisted in the
5 development of Staff testimony in Puget’s “PRAM 2” case, Docket UE-920630, and I
6 presented the Staff recommendation on environmental remediation in Puget Docket UE-
7 911476.

8 I analyzed PacifiCorp’s proposed accounting treatment of Clean Air Act
9 allowances in Docket UE-940947, and participated in meetings of PacifiCorp’s inter-
10 jurisdictional task force on allocations. More recently, I testified in PSE’s Power Cost
11 Only Rate Case, Docket UE-031725; PacifiCorp’s general rate cases, Dockets UE-
12 032065, UE-050684 and UE-061546, and UE-090205; Avista’s general rate case,
13 Dockets UE-070804 and UG-070805; and PSE’s general rate case, Dockets UE-072300
14 and UG-072301.

15 I have participated in the development of Commission rules, prepared detailed
16 statistical studies for use by commissioners and other Commission employees, and
17 examined utility reports for compliance with Commission regulations. I have also
18 presented Staff recommendations at numerous open public meetings.

20 II. SCOPE AND SUMMARY OF TESTIMONY

21
22 **Q. What is the purpose of your testimony in this proceeding?**

1 A. I provide Staff's response to PSE's electricity and natural gas cost of service studies, and
2 proposed electricity and natural gas rate spread and rate design.

3 I also address several ratemaking adjustments for the Company's electricity and
4 natural gas results of operations. In particular, in Adjustments 10.02 and 9.02, I calculate
5 the effect on revenues resulting from Staff's recommendation that the Commission reject
6 PSE's conservation phase-in proposal. I also present Staff's Property and Liability
7 Adjustments, 10.23 and 9.16.

8 Finally, I briefly summarize the Company's progress in resolving meter problems,
9 which was the subject of a settlement in the Company's last general rate case, Docket
10 Nos. UE-072300 and UG-072301.

11

12 III. DISCUSSION

13

14 A. Revenue Requirement Adjustments

15

16 1. Adjustments 10.02 and 9.02, General Revenues and Expenses

17

18 Q. Please generally describe the revenue effect of PSE's conservation phase-in
19 proposal.

20 A. Staff witness Parvinen describes the Company's conservation phase-in proposal. The
21 consequence of the proposal is to reduce the sales of kilowatt-hours of electricity or
22 therms of gas resulting in less revenues and lower power costs in the test year. This
23 reduced level of kilowatt-hours or therms also alters the billing determinants (that is the

1 units of power or gas) in the cost of service study and in the revenue allocation/rate
2 design models.

3
4 **Q. Is PSE's conservation phase-in proposal the only element included in Adjustments**
5 **10.02 and 9.02, General Revenues and Expenses?**

6 A. No. The conservation phase-in proposal is one of several line items in Adjustments 10.02
7 and 9.02. Other line items revise revenue accounts to reflect only those revenues related
8 to operations and to implement rate increases that occurred during or after the test year.

9
10 **Q. Does Staff contest all parts of PSE's general revenue adjustments?**

11 A. No. Staff contests only the conservation phase-in adjustments. The balance of the
12 general revenue adjustments is not contested by Staff.

13 The Company's electric adjustment for the conservation phase-in proposal is
14 shown in Exhibit No. JHS-10, page 10.02, line 13, in the amount of (\$10,048,562). The
15 reduction to gas revenues of \$2,505,739 and the reduction in purchased gas expenses of
16 \$1,813,533 are shown in Exhibit No. MJS-9, page 9.02, lines 7 and 33.

17
18 **Q. Why does Staff contest the conservation phase-in adjustments to revenue?**

19 A. The conservation phase-in adjustment is based on a reduction to sales of kilowatt-hours
20 or therms due to conservation measures occurring over the course of the test year. The
21 calculation of reduced sales due to conservation is not sufficiently rigorous for use in
22 revenue requirement determinations. Staff witness Parvinen more fully explains Staff's
23 position.

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Q. What is the effect of removing the conservation phase-in proposal from the revenue adjustments, as proposed by Staff?

A. Staff's Adjustment 10.02 shows an increase in net operating income ("NOI") of \$86,639,195, compared to the Company's NOI increase of \$80,396,404. Staff's Adjustment 9.02 shows an increase to NOI of \$20,919,190, compared to the Company's NOI increase of \$20,539,623.

The calculations of the Staff electric and gas adjustments can be seen on Exhibit No. KHB-2, page 2.9 and KHB-3, page 3.7, respectively.

Q. Are other adjustments affected by this disallowance of the conservation phase-in adjustment?

A. Yes. Other adjustments are affected and Staff reflects those changes in the appropriate adjustments. The reduction to power cost is captured in Adjustment 10.03; the tax benefit of pro forma interest is reflected in Adjustment 10.05; and the impact on any production factor is in Adjustment 10.37.¹ No other adjustments are impacted on the gas side.

2. Adjustments 10.23 and 9.16, Property and Liability

¹ The impact on Adjustment 10.05, Tax Benefit of Pro forma Interest, is due to the change in rate base coming out of Adjustment 10.37, the Production Factor. Staff's proposal to remove the production factor adjustment also removes its effect on Adjustment 10.05.

1 **Q. Please describe the Company's Property and Liability Adjustments 10.23 and 9.16,**
2 **and Staff's revisions to those adjustments.**

3 A. The property and liability adjustments, as proposed by PSE, estimate the premiums on
4 various insurance policies for the rate year period.

5 I recalculate the adjustments based on the latest known and measurable data.
6 According to PSE's Response to Staff Data Request No. 175, pro forma electric
7 insurance expense is about \$150,000 greater than previous estimates. The net effect of
8 the total adjustment is an increase in insurance expense of \$1,197,966 and a decrease to
9 NOI of \$778,678 for electric operations. Gas operations show a slight decrease of
10 \$360,084 to test year expense, which increases NOI by \$234,055.

11 The calculations of the Staff electric and gas adjustments can be seen on Exhibit
12 No. KHB-2, page 2.30 and KHB-3, page 3.21, respectively.

13
14 **B. Revenue Allocation and Rate Design**

15
16 **1. Electric Rate Spread and Rate Design**

17
18 **Q. Please explain revenue allocation and rate design.**

19 A. Revenue allocation, also known as rate spread, is the process of determining the portion
20 of total revenues to be collected from each rate schedule. Rate design takes the total
21 revenue for each rate schedule and determines the specific charges within the schedule,
22 such as the basic charge per month, the demand charge per kilowatt, and the exact cents
23 per kilowatt-hour.

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Q. What is the philosophy behind allocating revenues to the rate schedules?

A. The basic philosophy is to charge customers for the costs they impose on the total system. The premise of cost causation is present in many aspects of determining rates in a price-regulated industry. A precise calculation of the costs to be recovered by the customers on each rate schedule is possible, given any one set of allocation assumptions. However, the Commission has often stated that factors in addition to cost weigh in the rate spread decision, including the appearance of fairness, perceptions of equity, economic conditions in the service territory, and stability.

Q. What data are necessary to determine a fair allocation of revenues to the customer classes and how is that data used?

A. The utility must collect data on the use of electricity across a broad spectrum of all customers. This is known as a load study. While it is not feasible to precisely measure every customer's load, statistical sampling provides sufficient data for the intended purposes. For each customer sampled, the data collected should include, at a minimum, the electricity consumed during short time intervals around the clock and over an entire year. The purpose is to group customers into like patterns of use, to determine the time periods at which those customers demand the greatest amount of kilowatts, to compare the peak periods of a group to the lowest use periods within the same group, and to compare each group of customers to the other groups. The utility must also collect data on how it produces and buys electricity to meet customer needs.

1 The company's costs and plant balances, or rate base, are sorted into the basic
2 functions of doing business such as generation, transmission, and distribution. Then the
3 expenses and rate base are further classified as customer-related, energy-related, or
4 demand-related. Customer-related costs are those that vary as customers are added or
5 subtracted to the system. Energy-related costs vary by total consumption. Demand-
6 related costs vary by the power required to meet the demands of customers on each rate
7 schedule.

8 The customer consumption data from the load study is used to determine
9 allocation factors for each cost category. Those allocation factors are then applied to the
10 various classifications of costs to determine the cost responsibility of the customers on
11 each rate schedule.

12
13 **Q. Does Staff accept the Company's method to allocate plant and expenses to the**
14 **current rate schedules?**

15 A. Yes. The cost of service study fairly presents the costs imposed on the system by the
16 customers on each rate schedule.

17
18 **Q. Please explain the current revenue to cost ratios per rate schedule, as shown in**
19 **Company witness Hoff's Exhibit No. DWH-3, page 1, line 48.**

20 A. The 0.93 in column (b) indicates that current total Company revenues recover 93 percent
21 of costs including a fair return on rate base. (At least by PSE's calculation, hence the
22 request for a seven plus percent rate increase.) The numbers in each of the rate schedule
23 columns show each schedule's percentage of costs recovered. For example, in column
24 (c), revenues from residential customers under Schedule 7 recover 88 percent of the costs

1 allocated to those customers. And in column (e), revenues from commercial customers
2 on secondary voltage Schedule 25 recover 105 percent of the costs allocated to those
3 customers.

4
5 **Q. Please continue with an explanation of the parity ratios on line 49, page 1 of**
6 **Exhibit No. DWH-3.**

7 A. The parity ratio shows each rate schedule's relative contribution to the overall revenue to
8 cost ratio. Schedule 7 shows a parity ratio of 0.95, which equals its current revenue to
9 cost ratio of 0.88 divided by the total Company ratio of 0.93. Ideally, each class's parity
10 ratio should equal 1.00. A parity ratio of less than 1.00 indicates that the customers on
11 that schedule are not paying enough to recover the costs allocated to that schedule.
12 Therefore, those customers should get a greater than average rate increase. Conversely,
13 schedules with a parity ratio greater than 1.00 are contributing more than necessary to
14 recover the costs allocated to them. Those customers deserve a less than average rate
15 increase, or even a rate decrease, to bring their rates in line with the costs allocated to
16 them.

17
18 **Q. Is it possible to achieve a parity ratio of 1.00 for every rate schedule?**

19 A. It is arithmetically possible with a given set of assumptions. But it is not so easy to do in
20 practice. The assumptions and results of the cost of service study are a subject of debate
21 between the various consumer advocates. Each advocate can, and does, present a
22 different cost of service study.

1 **Q. Does Staff consider the cost of service study and parity ratios in Exhibit No. DWH-3**
2 **to be a fair representation of the class contributions to the overall rate of return?**

3 A. Yes. Staff's adjustments to electric revenue requirement revise the absolute numbers, but
4 the relative proportion of each schedule's contribution to the total remains approximately
5 the same.

6
7 **Q. What percentages of the average percent increase to revenues does PSE propose?**

8 A. PSE proposes an average percent increase to the following schedules:

- 9 ○ Schedule 7, Residential;
- 10 ○ Schedule 26, Secondary voltage with demand > 350 kW;
- 11 ○ Schedules 46/49, High Voltage; and
- 12 ○ Schedules 448/449, Choice/Retail Wheeling.

13 PSE proposes a 75 percent of average increase to the following schedules:

- 14 ○ Schedule 24, Secondary voltage with demand < 50 kW;
- 15 ○ Schedules 31/35/43, Primary Voltage; and
- 16 ○ Schedules 50-59, Lighting schedules.

17 PSE proposes a 50 percent of average increase to the secondary voltage Schedules 25 and
18 29.

19 Schedule 40, the Campus Rate, is determined by the outcomes of various other
20 schedules. It would receive a slightly higher than average increase. Finally, PSE
21 proposes that the total increase to the firm resale rate be in excess of 20 percent to bring
22 those customers to full parity. Exhibit Nos. DWH-4 and 8.

23

1 **Q. How are the parity ratios affected by the above percentage increases?**

2 A. The schedules receiving less than 100% of the average increase will remain above parity
3 ranging from 105% to 109%. The other classes will stay within five percent of parity.
4 Exhibit No. DWH-3.

5
6 **Q. Does Staff accept the Company's proposed revenue allocation?**

7 A. Yes. The proposed revenue allocations maintain or slightly improve each schedule's
8 movement towards parity.

9
10 **Q. Turning to rate design, please describe the basic concept of that subject.**

11 A. Rate design concerns the various rate elements within a rate schedule. These elements
12 include the monthly basic charge, demand charges, reactive power charges, and energy
13 charges.

14
15 **Q. Did Staff review PSE's proposed electric rate design?**

16 A. Yes. The Company's proposed rate design is presented by Company witness Hoff at
17 Exhibit No. DWH-1T, beginning at page 22.

18
19 **Q. Please summarize the Company's proposed electric rate design.**

20 A. PSE proposes an equal percentage increase to all elements of rates for all schedules with
21 minor exceptions, as described in Mr. Hoff's testimony.

22
23 **Q. What is the effect of increasing each component of rates by the same percentage?**

1 A. The effect is to maintain the ratio of revenues collected by each rate component.

2

3 **Q. Does Staff accept the Company's rate design proposal?**

4 A. Staff accepts the equal percentage increase to all components of rate design in this case.

5

6 **2. Gas Rate Spread and Rate Design**

7

8 **Q. What is the purpose of a "cost of service" analysis, and its derivation of parity**
9 **ratios?**

10 A. The cost of service analysis shows the rate of return provided by each rate schedule,
11 based on a given set of cost allocation factors. If an increase in overall revenues is
12 necessary to provide the utility with a fair return on rate base, then each schedule may
13 require a different percentage increase to achieve an equal rate of return for all schedules.
14 Parity is accomplished if all schedules provide the same rate of return on the rate base
15 allocated to them. The "art" in revenue allocation is in the determination of how much of
16 the average rate increase is fairly apportioned to each schedule.

17

18 **Q. The settlement of the 2007 general rate case included an agreement that "PSE will**
19 **conduct a collaborative on natural gas cost of service, rate spread and rate design in**
20 **advance of PSE's next general rate case."**² **Did this collaboration occur?**

² *WUTC v. Puget Sound Energy, Inc.*, Dockets UE-072300 and UG-072301 (consolidated), Order 12 at Appendix B, ¶ 33 (October 8, 2008).

1 A. Yes. PSE hired an outside consultant to facilitate discussions with the parties to the
2 settlement. The parties met several times during 2008, yet they were unable to reach a
3 mutual agreement. The report of the facilitator is contained in Exhibit No. JKP-4.
4

5 **Q. What was the topic of greatest controversy in the collaborative process?**

6 A. The allocation of the cost of the distribution plant in Account 376, Mains, was the
7 primary focus of discussions and proved to be irresolvable. Large industrial customers
8 objected to being allocated any small diameter mains, while Public Counsel argued that
9 the system as a whole benefits all customers and, therefore, that all mains must be paid
10 for by all customers.

11 PSE for its part sought a solution that reaches a fair compromise. Staff was of a
12 similar opinion.
13

14 **Q. On what basis did PSE allocate gas distribution mains in the present case?**

15 A. PSE classifies distribution mains as a demand-related cost, but allocates them on a
16 combination of peak demand and average demand. PSE defines “peak demand” as the
17 demand for gas on the coldest day imaginable, which for PSE’s service area is a day with
18 52 heating degree days, or an average temperature of 13 degrees. On this day it is also
19 assumed that all customers on interruptible schedules are off the system. PSE designs its
20 system to meet this extreme demand and calls it the “system design day.” Average
21 demand is the total consumption for the year divided by the days in the year. The ratio of
22 average demand to system design day demand is 33 percent. Therefore, PSE’s proposal

1 allocates the cost of distribution mains 33 percent on average demand and 67 percent on
2 peak demand.

3
4 **Q. What is PSE's next step in allocating the cost of mains to rate schedules?**

5 A. The two-thirds of the cost related to demand is allocated among the schedules based on
6 each schedule's demand on the design day peak. This peak assumes all interruptible
7 schedules are curtailed at that time. The remaining one-third of the cost of distribution
8 mains is divided among the schedules on annual throughput, but with allocations
9 differing by the diameter of the mains. Mains of four inches or greater are allocated to all
10 classes on annual throughput. Mains smaller than two inches are allocated on annual
11 throughput for all classes except industrial Schedules 85, 85T, 87, 87T, and contracts.
12 Medium sized mains of two to three inches are split one-third to all classes on annual
13 throughput and two-thirds to all classes except interruptible Schedules 87, 87T, and
14 contracts.

15
16 **Q. Please remind us of the importance of the allocation of distribution mains to rate
17 schedules.**

18 A. Distribution mains represent over 56% of total rate base. This is a large number and
19 small movements in its allocation can make big differences to certain customer groups.
20 To satisfy these groups and to remain fair to all, it is important to find a middle ground
21 that gives the Company its opportunity to earn a fair return. That being said, the ultimate
22 use of the cost of service study is to judge the ratio of each schedule's return on allocated
23 rate base to the average return from all schedules. A fairly broad range of deviation from

1 the average is acceptable, thereby allowing for fairness and reason. The allocation of the
2 total revenue requirement will be based on those principles of fairness and reason, not
3 just a rigid arithmetical application of cost of service results.

4
5 **Q. The issue of using a 'design day' for determining the peak demand has been**
6 **controversial in the past. Does Staff accept PSE's system design day method for**
7 **allocating demand-related plant and expenses?**

8 A. Staff does not oppose the peak demand allocation method proposed by PSE in this case,
9 but reserves the right to offer alternatives in the future.

10
11 **Q. PSE witness Phelps depicts each schedule's current rate of return on rate base in**
12 **Exhibit No. JPK-5. Do you accept this as a fair representation of the class**
13 **contributions to the overall rate of return?**

14 A. Yes. Staff's revenue requirement adjustments revise the absolute numbers, but the
15 relative proportion of each schedule's contribution to the total remains approximately the
16 same.

17
18 **Q. What percentages of the average percent increase to revenues does PSE propose for**
19 **each rate schedule?**

20 A. PSE proposes no increase to Limited Interruptible Schedule 86; and an increase of 50%
21 of the average for large volume Schedules 41/41T and interruptible Schedules 85/85T.
22 The water rental tariff receives an increase equal to the average with gas and the contracts
23 receive increases based on the contract. The balance of the required revenue increase is

1 proposed as an equal percent increase to the rest of the schedules; namely, residential
2 Schedule 23, commercial and industrial Schedules 31 and 61, and Schedules 87/87T,
3 Non-exclusive Interruptible and Transportation. Exhibit No. JPK-13.

4
5 **Q. How are the parity ratios affected by these percentage increases?**

6 A. Schedules receiving average increases maintain parity ratios within five percent of
7 theoretical parity. The schedules with less than average increases or no increase improve,
8 but remain above parity by 116% to 150%. Exhibit No. JPK-5.

9
10 **Q. Does Staff accept the Company's proposed revenue allocation?**

11 A. Yes. The Company's proposed rate spread fairly allocates the revenue increase among
12 the schedules and slightly enhances parity among them.

13
14 **Q. Turning to gas rate design, please describe PSE's proposal for its natural gas rate
15 schedules.**

16 A. PSE proposes an equal percent increase to all components of all schedules.

17
18 **Q. What is the impact of PSE's equal percent increase on all rate components?**

19 A. The effect of an equal percentage change to each rate component is to maintain the ratio
20 of revenues collected by each component.

21
22 **Q. What is PSE's request for recovery of customer allocated costs?**

1 A. PSE requests that the Residential Schedule 23 monthly customer charge be increased to
2 \$10.82 from the current \$10.00, and that the General Service Schedule 31 monthly
3 customer charge be increased to \$32.45 from the current \$30.00. Exhibit No. JPK-24.
4

5 **Q. Is PSE's gas proposal similar to its proposal for electric rates?**

6 A. Yes.
7

8 **Q. What is Staff response to the Company's gas rate design proposal?**

9 A. Staff accepts the equal percentage increase to all components of rate design in this case.
10

11 **C. Metering and Billing**
12

13 **Q. In the settlement of Docket UE-072300 PSE agreed to solve certain metering and**
14 **billing problems.³ What is the progress on that issue?**

15 A. PSE's compliance report for the period ending September 30, 2009 shows that PSE has
16 resolved virtually all problems from meters discovered as failing prior to the end of 2008.
17 The same can be said for meter problems found during 2009. PSE has improved its
18 process to more quickly discover potential problems, to determine the validity of any
19 meters showing no consumption, and to resolve the problems.
20

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

22 A. Yes.

³ *WUTC v. Puget Sound Energy, Inc.*, Dockets UE-072300 and UG-072301 (consolidated), Order 12 at Appendix D, ¶¶29-40 (October 8, 2008).