

**EXH. PKW-8CT
DOCKETS UE-170033/UG-170034
2017 PSE GENERAL RATE CASE
WITNESS: PAUL K. WETHERBEE**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-170033
Docket UG-170034**

PREFILED SUPPLEMENTAL DIRECT TESTIMONY (CONFIDENTIAL) OF

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

**REDACTED
VERSION**

APRIL 3, 2017

PUGET SOUND ENERGY

**PREFILED SUPPLEMENTAL DIRECT TESTIMONY (CONFIDENTIAL) OF
PAUL K. WETHERBEE**

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1 **PUGET SOUND ENERGY**

2 **PREFILED SUPPLEMENTAL DIRECT TESTIMONY (CONFIDENTIAL) OF**
3 **PAUL K. WETHERBEE**

4 **I. INTRODUCTION**

5 **Q. Are you the same Paul K. Wetherbee who provided prefiled direct testimony**
6 **in these dockets on behalf of Puget Sound Energy (“PSE”)?**

7 A. Yes, I filed prefiled direct testimony, Exh. PKW-1CT, and six supporting exhibits
8 (Exh. PKW-2 through Exh. PKW-7). I sponsor the following exhibits in support
9 of this prefiled supplemental direct testimony: Exh. PKW-9C through Exh.
10 PKW-14C.

11 **Q. What is the purpose of your prefiled supplemental direct testimony?**

12 A. I present an update to the rate year power costs that are presented in my prefiled
13 direct testimony for changes that have occurred since the input assumptions were
14 developed for the original filing dated January 13, 2017. I also present projected
15 power costs for use in the contingent calculation of the Power Cost Adjustment
16 (“PCA”) baseline rate assuming Microsoft takes retail wheeling service pursuant
17 to a special contract. This contingency was described in the Prefiled Direct
18 Testimony of Jon A. Piliaris, Exh. JAP-1T.

1 **Q. Please summarize the updated power costs proposed by PSE in this**
2 **supplemental direct testimony.**

3 A. Projected rate year power costs in this supplemental filing are \$737.7 million, a
4 \$7.6 million (or 1.0 percent) reduction from the originally filed power costs of
5 \$745.3 million. Please see Exh. PKW-9C for a comparison of these updated
6 power costs with power cost in PSE's original filing and the 2016 Power Cost
7 Update.

8 **II. UPDATE TO PROJECTED RATE YEAR POWER COSTS**

9 **Q. Has PSE reconciled the updated power costs with those originally filed on**
10 **January 13, 2017?**

11 A. Yes. Please see (i) Exh. PKW-10C for a detailed comparison of updated power
12 costs with power costs in the original filing and (ii) Exh. PKW-11C for a detailed
13 comparison of updated power costs with power costs in the 2016 Power Cost
14 Update, which is the basis for rates currently in place.

15 **Q. What did PSE change relative to the original filing?**

16 A. PSE changed four types of inputs to update power costs for this supplemental
17 filing:

- 18 • PSE updated forward natural gas prices to average prices
19 for the three-month period ending February 3, 2017. The
20 original filing was based on average prices for the three-
21 month period ending September 23, 2016.
- 22 • PSE updated hedges to include transactions entered as of
23 February 3, 2017. The original filing included transactions
24 as of September 23, 2016.

- PSE updated rates charged to PSE for upstream pipeline costs by Westcoast, Nova, Foothills and Cascade Natural Gas to include rates effective January 1, 2017 and to correct nonmaterial errors in the original filing.
- PSE updated resources to include energy from one new Schedule 91 contract that started providing energy to PSE in January 2017.

Q. How did PSE update projected power costs for the rate year?

A. PSE updated forward gas prices and resource assumptions in the AURORA hourly dispatch model. AURORA was rerun to produce updated forward market power prices and PSE dispatch information. Certain power costs that are accounted for outside of AURORA are downstream of market prices and dispatch decisions, and these costs were updated to reflect the revised market prices and dispatch information. The impacts on specific items relative to the original filing are presented in Exh. PKW-10C.

Q. How do projected gas prices inputs into AURORA for this proceeding compare with those in the original filing and the 2016 Power Cost Update?

A. Use of a single price can be misleading because there are different projected gas prices for each month of the rate year and for the different trading hubs from which PSE purchases gas. Additionally, these prices do not consider the impact of the fixed price gas contracts at the price cut off date, which may significantly change the average gas price. For purposes of comparison, however, the average forward gas price at the Sumas trading hub for the rate year is \$2.55 per million British thermal units (“MMBtu”) for the three months ended February 3, 2017, which is \$0.15 per MMBtu lower than the average \$2.70 per MMBtu price

1 included in the original filing. The average gas price reflected in the 2016 Power
2 Cost Update was \$2.76 per MMBtu for the three months ended August 26, 2016.

3 Table 1 below presents average rate year gas price comparisons.

4 **Table 1. Average Annual Rate Year Gas Prices**

Rate Case =>	2017 GRC Supplemental	2017 GRC	2016 Power Cost Update
3-Mo Average at =>	2.3.17	9.23.16	8.26.16
Rate Year	Jan 2018– Dec 2018	Jan 2018– Dec 2018	Dec 2016– Nov 2017
Sumas	\$2.55	\$2.70	\$2.76
Change from Prior	\$(0.15)	\$(0.06)	\$(1.10)

5 **Q. How do more recent forecast rate year natural gas prices compare to the**
6 **three-month average at February 3, 2017?**

7 A. As of March 23, 2017, the three-month average rate year Sumas natural gas price
8 has decreased to \$2.49 per MMBtu, a decrease of \$0.06 per MMBtu from the
9 \$2.55 per MMBtu used to determine the supplemental rate year power costs in
10 this proceeding.

11 **Q. What are the hedges included in rate year power costs?**

12 A. The rate year power costs include gas-for-power and power contracts that were
13 transacted as of February 3, 2017, for delivery during the rate year (calendar year
14 2018). Table 2 below provides a summary of the fixed-price rate year power
15 portfolio hedges included in rate year power costs.

1
2
3

**Table 2. PSE's 2017 GRC Rate Year
Short-Term Fixed Price Power Portfolio Hedges
at February 3, 2017**

	MWh Volume	Rate Year Cost	Avg. \$/MWh
On-Peak Power Purchases			
Off-Peak Power Purchases			
Total Power Purchases			
On-Peak Power Sales			
Off-Peak Power Sales			
Total Power Sales			
Net Power Fixed			

	Dth Volume	Rate Year Cost	Avg \$/Dth
Net Financial Gas for Power			

4

Q. Please quantify PSE's updated net power cost projection for this proceeding.

5

A. As shown in Table 3 below, PSE's projected rate year net power costs are

6

\$737.7 million.

7

**Table 3. Projected Rate Year Power Costs
(\$ in thousands)**

8

AURORA	\$486,731
Costs not in AURORA	\$250,979
Projected Rate Year Power Costs	\$737,710

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1 Please see Exh. PKW-9C for PSE's projected rate year net power costs. Please
2 also see the Prefiled Supplemental Direct Testimony of Katherine J. Barnard,
3 Exh. KJB-10T, for the adjustment of PSE's projected rate year power costs to test
4 year levels.

5 **Q. Is the impact of the Clean Air Rule different in these update power costs than**
6 **it was in PSE's original power cost projection for this proceeding?**

7 A. Yes. PSE's estimate of the impacts of the Clean Air Rule has changed from
8 \$18.5 million to \$19.2 million in this supplemental filing. The revised estimate is
9 presented in Exh. PKW-12C.

10 **Q. Why is the impact of Clean Air Rule larger than it was in PSE's original**
11 **power cost projection for this proceeding?**

12 A. As indicated above, forward natural gas prices have decreased from the levels
13 assumed in the original filing. As a result, use of PSE's natural gas fired resources
14 is more economical relative to market purchases. The AURORA output when
15 Clean Air Rule emissions constraints are removed indicates that without the
16 constraints, the gas fired units would run more than they would have given the
17 original gas price inputs. As a result, when the Clean Air Rule emissions
18 constraints are implemented, the cost of replacing output from gas fired resources
19 with market purchases is higher than it was in the original filing.

1 **III. CONTINGENT CALCULATION OF POWER COSTS**

2 **Q. Please explain the contingent calculation of power costs.**

3 A. PSE’s projected power costs are based on the current load forecast, which reflects
4 the status quo with Microsoft taking service on Schedule 40. If Microsoft were to
5 move its Schedule 40 load to retail wheeling service pursuant to a special
6 contract, total projected power costs and power costs on a cost per MWh basis
7 would differ from those proposed by PSE. As described in the Prefiled Direct
8 Testimony of Jon A. Piliaris, Exh. JAP-1T, a contingent calculation of the
9 baseline rate is required so that, in the event that the portion of Microsoft’s load
10 currently served on Schedule 40 is moved to a retail wheeling service, PSE has a
11 baseline rate that more accurately represents the power costs attributable to
12 remaining retail customers. The contingent calculation of power costs provides
13 the basis for that contingent baseline rate.

14 **Q. How did PSE develop the contingent projection of power costs?**

15 A. PSE removed Microsoft’s projected rate year energy requirements on Schedule 40
16 from total PSE rate year energy and reran the AURORA model to get a new
17 estimate of PSE’s power costs without the Microsoft load. PSE then made a pro
18 rata adjustment to its proposed costs for balancing and contingency reserves to
19 account for the removal of Microsoft’s load, because retail wheeling customer are
20 charged rates under PSE’s Open Access Transmission Tariff (“OATT”) for these
21 services.

1 **Q. What is the impact on rate year power costs of these contingent calculations?**

2 A. Rate year power costs in the contingent calculation are \$724.3 million, a reduction
3 of \$13.5 million from the amount proposed in this supplemental filing. A
4 summary of contingent power costs is presented in Exh. PKW-13C, and a detailed
5 comparison of contingent power costs with power costs proposed in this
6 supplemental filing is presented in Exh. PKW-14C.

7 **IV. CONCLUSION**

8 **Q. Does that conclude your prefiled supplemental direct testimony?**

9 A. Yes, it does.