EXH. BDJ-1T
DOCKET UE-20___
2020 PSE PCORC
WITNESS: BIRUD D. JHAVERI

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent**	**Docket UE-20____**

PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF

BIRUD D. JHAVERI

ON BEHALF OF PUGET SOUND ENERGY

DECEMBER 9, 2020

PUGET SOUND ENERGY

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I. INTRODUCTION

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

A. My name is Birud D. Jhaveri. I am employed as Manager, Pricing and Cost of Service with Puget Sound Energy ("PSE"). My business address is 355 110th Avenue NE, Bellevue, Washington, 98004.

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

A. Yes. Please see the First Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BJD-2.

Q. What topics are you covering in your testimony?

A. This prefiled direct testimony describes the derivation of the temperature adjustments to energy sales and the production factor used in this filing, how changes to the power cost only rate case ("PCORC") revenue deficiency are allocated to rate classes and the resulting impacts to customers.

Q. Please summarize the revenue impacts associated with this filing.

A. The total revenue deficiency resulting from this rate proposal is $78.5 million,[1] an average 3.69 percent increase relative to rates effective in October 2020 from PSE's 2019 general rate case, Docket UE-190529, *et al*. (the "2019 GRC") and Schedule 95 Power Cost Adjustment rates effective as of December 1, 2020.

II. TEMPERATURE ADJUSTMENT AND PRODUCTION FACTOR CALCULATIONS

Q. Have the test year pro forma delivered energy in the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, and the system level load in the Fifth Exhibit to the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-6, been adjusted for temperature?

A. Yes. The test year pro forma energy sales by rate class shown in in Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, and at the system level on line 30 in the Fifth Exhibit to the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-6, have been adjusted for, and thus include, an additional 125,765 MWh of temperature adjustment, excluding Schedule 139 customer load adjustments as described below.

[1] The change in total power costs is further discussed in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T.

Q. How did PSE normalize the test year delivered load for temperature in this case?

A. The Second Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-3, presents the rate schedule level temperature adjustment used in this filing. PSE determined the temperature adjustment to test year delivered load by following the methodology and procedures approved in the final order in PSE's 2019 GRC. PSE estimated the temperature adjustment using econometric model equations to characterize the relationship between the temperature variables and the daily energy use per customer by class. The temperature variable coefficients of those equations vary by rate class. The data source was a large sample of daily energy readings by rate schedule from PSE's meter data management system, which houses daily usage data from PSE's automated meter reading (AMR) and automated meter infrastructure (AMI) systems. The historical data period set for modeling is the same four-year period of 2015 through 2018 as used for modeling in PSE's 2019 Commission Basis Report filing.[2]

PSE calculated the temperature adjustment to monthly energy use per customer for each rate schedule by multiplying the temperature variable coefficients by the difference between the actual and normal heating degree days ("HDDs") and cooling degree days ("CDDs"). PSE repeated this process for each month of the test year for all the HDD and CDD variables included in the model. PSE added

[2] PSE used the 2019 Commission Basis Report as it provided the most current historical period for modeling. The 2019 Commission Basis Report filing was made in March 2020 and includes the most recent approved weather sensitivity coefficients and data from the four-year modeling period ending in 2018.

monthly temperature adjustments to actual system load to calculate the normalized system load in each month. PSE then added these loads across the months to calculate the test year temperature-normalized load.

Q. What period did PSE use to calculate "normal" temperature in this analysis?

A. PSE calculated "normal" temperature using temperature data compiled over the 30-year period from January 1989 through December 2018.

Q. Did PSE include Schedule 139 customers in this analysis?

A. No. As discussed in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T, PSE excluded loads for PSE's customers subscribing to the Voluntary Long Term Renewable Energy Purchase ("Green Direct") program from all other electric customer loads in calculating the baseline rate and the deficiency in this proceeding. As a result, the historical data used for modeling the temperature adjustment also excludes the energy sales and number of Schedule 139 Green Direct customers for purposes of calculating the production factor and Generated, Purchased and Interchanged (GPI) load shown in the Third Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-4.

Q. What are the results of the temperature adjustment analysis?

A. Table 1 below provides a summary of the results of this analysis by rate class.

Table 1. Temperature Adjustment to MWh by Schedule

Rate Schedule	MWh Adjustment
Schedule 7	113,614
Schedule 8/24	9,698
Schedule 11/25	3,448
Schedule 12/26	(3,493)
Schedule 10/31	(280)
Schedule 43	2,699
Firm Resale	79
Total	125,765

Q. Please explain how PSE calculated the production factor.

A. Please see the Seventh Exhibit to the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-8, for an overview of the need for the use of a production factor. Please see the Third Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-4, for the determination of the production factor.

Test year normalized delivered load is 19,685,487 MWhs. Included in this amount is a test year adjustment to increase loads by 125,765 MWhs to normalize for warmer than normal weather that occurred during the test year. Rate year normalized delivered load, which is based on PSE's approved F20 load forecast, is 19,359,468 MWhs. As stated earlier, both amounts exclude the load associated

with PSE's customers who take service under Schedule 139. The resulting production factor is 1.01684. This production factor represents the fact that the rate year loads are expected to be lower than the test year loads by approximately 1.7 percent.

III. TOTAL PCORC REVENUE REQUIREMENT

Q. Please explain the difference between the total power cost deficiency presented in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T, and the total PCORC revenue requirement used for rate spread in the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6.

A. The difference between the total power cost deficiency discussed in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T, and the total PCORC revenue requirement used for the development of Schedule 95 rates in the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, relates to the treatment of electric load served under PSE's Green Direct program through Schedule 139. In this case, PSE has excluded both the energy supplied to customers of the PSE's Green Direct program and the purchase power agreements used to serve their energy requirements from the development of PSE's Power Cost Adjustment Mechanism ("PCA") Baseline Rate and the associated deficiency. However, the capacity provided by the purchase power agreements used to serve their energy requirements in PSE's PCA Baseline revenue requirement to support service to these Green Direct customers remain.

This presented a challenge in the development of the Schedule 95 rates proposed in this case because PSE needed to develop a rate proposal in which part of the service to a group of customers (i.e., the capacity services provided to Green Direct customers) is included in the revenue requirement in this case, but another part (i.e., the energy supplied to Green Direct customers) is not. This required a creative solution.

Q. Please explain.

A. As discussed in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T, PSE's overall deficiency in this proceeding is $78.5 million. Consistent with the calculation of the PCA Baseline Rate, which excludes the electric load of PSE's customers subscribing to the Green Direct program and the cost of the power purchase agreements used to serve them, the billing determinants used to develop the Schedule 95 rates that recover this overall PCORC revenue deficiency also exclude the Green Direct load. Yet, these rates recover costs from all customers, including the Green Direct customers whose load was excluded from the billing determinants.

All other things equal, this would result in an over-collection of PSE revenue deficiency. However, Schedule 139 customers receive a rate credit for the energy-related power cost component of the overall PCA Baseline Rate, including both fixed and variable power costs. Based on the 2019 GRC, this credit is 75 percent of the overall power cost baseline rate. So, to the extent that Green Direct customers pay the Schedule 95 rates determined in this case, 75 percent of it is

credited back to the same customers. Absent any further action, this would result in PSE over-recovering 25 percent of the Schedule 95 revenue from Green Direct customers.

To address this over-collection, PSE reduced the overall revenue deficiency identified in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T, by the residual revenue stream from Green Direct customers to calculate the appropriate PCORC revenue deficiency to be recovered through the application of Schedule 95 to all electric retail customers, including those served in PSE's Green Direct program. When applied to the deficiency in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T, the Schedule 139 surplus revenue reduces the total PCORC revenue requirement used for rate spread by $1.3 million to $77.2 million, as shown in the Fourth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-5, and in the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6.

It is important to note, however, that even though the deficiency is reduced for purposes of developing the Schedule 95 rates, these rates are designed to recover (in concert with Schedule 139) no more or less than the full amount of deficiency discussed in the Prefiled Direct Testimony of Susan E. Free, Exh. SEF-1T. Please see the Seventh Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-8, at page 2, column u, "Net Adjustments", for the rate impacts, in which the net impact of Schedule 95 and Schedule 139 are taken into account, and the total increase is $78.5 million.

Q. Have Schedule 139 customers started taking service under the Green Direct program?

A. Yes. As discussed in the Prefiled Direct Testimony of William T. Einstein, Exh. WTE-1T, Schedule 139 customers in Phase 1 of the Green Direct program started taking service in November of 2020, and Schedule 139 customers in Phase 2 of the Green Direct program will start taking service in March 2021. Therefore, all customers of the Green Direct program will be taking service during the rate year in this proceeding.

IV. RATE SPREAD AND DESIGN

Q. Please summarize how the proposed change to the Power Cost Baseline Rate will be spread to customers.

A. The PCA requires that changes in rates attributable to adjustments to the Power Cost Baseline Rate as a result of a power cost only review be spread to customers based upon the peak credit results from PSE's most recent general rate case. In PSE's 2019 GRC, the Commission ordered PSE to use the 25 percent demand and 75 percent energy fixed-method in lieu of the peak credit method until a new cost of service study is conducted under the new rules in the Commission's Cost of Service Study rulemaking.[3] PSE applied the fixed-method results from the 2019 GRC to the total PCORC revenue requirement to determine the amount to

[3] On July 7, 2020 the Commission entered General Order R-599 in Consolidated Dockets UE-170003 and UG-170004, adopting rules in the Commission's Cost of Service Study rulemaking.

be allocated to each rate class. This allocation to rate class is shown on page one of the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6. PSE then divided the allocated PCORC revenue requirement by test year pro forma delivered kWh for each rate class, excluding Schedule 139 load, to calculate the amount to be charged to customers receiving service under each class on a cents/kWh basis. Please see the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, at page 1, for this rate calculation.

Q. Please describe the fixed-method used in the 2019 GRC to classify generation and transmission related costs.

A. The fixed methodology used in PSE's 2019 GRC:

(i) classified 25 percent of generation and transmission costs on demand,

(ii) classified 75 percent of generation and transmission costs on energy,

(iii) allocated all demand costs (25 percent of generation and transmission costs) to retail rate classes based on a four coincident peak demand allocation factor (excluding interruptible tariffs Schedules 43 and 46), and

(iv) allocated all energy costs (75 percent of generation and transmission costs) to retail rate classes based on the contribution of the rate class to total annual kWh sales.

This resulted in fixed-method weighted allocation factors for each rate class, which are shown in column (e) on page one of the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6.

An example of the calculation of such a factor follows: if the residential class represents 58 percent of the top four coincident system peak hours and 52 percent of the annual retail kWh load, its fixed-method weighted allocation factor would be (25% x 58% + 75% x 52%), or 53 percent. Therefore, this class would be allocated 53 percent of PCORC costs.

Q. Please describe page one of the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, titled "Calculation of Schedule 95 Rate."

A. Page one of the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, presents the calculation of the PCA rate, Schedule 95, for each rate class.[4] It describes and uses the calculation of the weighted allocation factors used in the 2019 GRC. This exhibit then shows how PSE used those allocation factors to allocate the PCORC revenue requirement to each rate class. Finally, it calculates the Schedule 95 rates for each class by dividing the allocated revenue requirement by the weather adjusted delivered kWh, excluding Schedule 139 load, for each class for the test year.

Q. Please summarize the impacts of the proposed Schedule 95 rates.

A. Table 2 summarizes the impacts of the proposed Schedule 95 rates. The results show that the percentage impacts are in the range of a 1.3 percent increase (Area & Street Lighting) to 7.4 percent increase (Firm Resale). Residential

[4] The revenue deficiency on this page for the lighting class is converted to a monthly $/lamp or $/watt charge on pages two through six of the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6.

customers receive 53 percent of the overall revenue increase. As shown on page three of the Seventh Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-8, this translates into a $3.42 per month bill increase for an average residential customer using 900 kWh per month.

Table 2. Summary of Impacts of Proposed Schedule 95 Rates by Class

Rate Schedule	Revenue Impact	% Impact
Schedule 7	$41,286,291	3.51%
Schedule 8/24	10,901,851	3.88%
Schedule 11/25/29	11,414,139	4.00%
Schedule 12/26	7,087,463	4.17%
Schedule 10/31/35/43	5,304,011	4.00%
Schedule 46/49	2,248,795	4.84%
Schedules 50-59	239,523	1.33%
Firm Resale	26,625	7.39%
Total	$78,508,698	3.69%

Q. Has PSE prepared revised Schedule 95 (Power Cost Adjustment Clause) tariff sheets to reflect the proposed adjustments to the Power Cost Baseline Rate?

A. Yes. PSE has filed the revised tariff sheets for Schedule 95 in this docket. Please see the Fifth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-6, for the amounts calculated for each rate class.

V. COMPLIANCE FILING

Q. Please summarize the rates that PSE intends to update in its compliance filing for this case.

A. The compliance filing in this case will include updates to the following electric rate schedules:

- Electric Schedule 95 (Power Cost Adjustment Clause),

Sheet No. 95	Power Cost Adjustment Clause
Sheet No. 95-A	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-B	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-C	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-C.1	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-C.2	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-D	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-E	Power Cost Adjustment Clause (Cont.)
Sheet No. 95-E.1	Power Cost Adjustment Clause (Cont.)

- Electric Schedule 142 (Revenue Decoupling Adjustment Mechanism).

Sheet No. 142-D	Revenue Decoupling Adjustment Mechanism (Cont.)
Sheet No. 142-E	Revenue Decoupling Adjustment Mechanism (Cont.)
Sheet No. 142-F	Revenue Decoupling Adjustment Mechanism (Cont.)
Sheet No. 142-G	Revenue Decoupling Adjustment Mechanism (Cont.)

The rate credit for customers participating in PSE's Green Direct program under the electric Schedule 139 will also be reset with the proposed changes to the Power Cost Baseline Rate in the compliance filing or a subsequent filing.

Q. Is PSE proposing to update Electric Schedule 142 amortization rates?

A. No. PSE is not proposing to update Electric Schedule 142 amortization rates in this proceeding.

Q. Is PSE proposing to update the Allowed Revenue or Revenue per Unit listed in Electric Schedule 142?

A. Yes. PSE is proposing to update the electric fixed production cost Allowed Revenue and Revenue per Unit in its decoupling mechanism. Please see the Sixth Exhibit to the Prefiled Direct Testimony of Birud D. Jhaveri, Exh. BDJ-7, for the calculation of the electric fixed production cost Allowed Revenue and Revenue per Unit. The revised tariff sheets for Schedule 142 have been filed in this docket.

VI. CONCLUSION

Q. Does that conclude your prefiled direct testimony?

A. Yes, it does.