Exh. JL-1T
Docket UG-181053
Witness: Jing Liu

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **NORTHWEST NATURAL GAS COMPANY,** **Respondent.**	**DOCKET UG-181053**

TESTIMONY OF

Jing Liu

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

In Support of the Partial Multiparty Settlement Agreement on Decoupling

June 6, 2019

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LIST OF EXHIBITS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Jing Liu. My business address is the Richard Hemstad Building, 1300 South Evergreen Park Drive Southwest, P.O. Box 47250, Olympia, Washington, 98504. My email address is jing.liu@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 a Regulatory Analyst in the Energy Regulation section of Regulatory Services.

Q. Are you the same Jing Liu who is sponsoring joint testimony in this proceeding?

A. Yes.

II. SCOPE AND SUMMARY OF TESTIMONY

Q. Please explain the scope and purpose of your testimony.

A. I am writing this testimony to support the Partial Multiparty Settlement Agreement on Decoupling (Decoupling Agreement) entered into by Northwest Natural Gas Company d/b/a NW Natural ("NW Natural" or the "Company"), Staff of the Washington Utilities and Transportation Commission ("Staff"), the Alliance of Western Energy Consumers ("AWEC"), and The Energy Project ("TEP")

(individually, "Party"; collectively, "Parties"). The Decoupling Agreement allows Northwest Natural Gas d/b/a NW Natural ("NW Natural" or "Company") to implement a revenue decoupling mechanism beginning on the date new general rates go into effect, and resolves Staff's concerns with the decoupling mechanism initially proposed by the Company.

I first present background and the current status of decoupling in Washington State. I then explain the main components of the Company's decoupling mechanism proposal and Staff's rationale for supporting those components. Finally, I discuss some of the modifications that the settling parties (Parties) agreed to, which result in a decoupling mechanism that Staff supports and recommends that the Commission approve.

Q. Have you prepared any exhibits in support of your testimony?

A. Yes. I have prepared Exhibits JL-2 through JL-4.

Exh. JL-2 shows a comparison of decoupling mechanisms in Washington.

Exh. JL-3 shows Staff's analysis of the Company's operating expense per customer between 2013 and 2018.

Exh. JL-4 provides the Company's estimate of incremental cost as well as revenue associated with additional customers.

III. BACKGROUND

Q. Please explain the concept of revenue decoupling.

A. Decoupling is a regulatory mechanism under which a utility's authorized revenue is decoupled from its sales. Under the traditional regulatory framework, a utility's rate is set in a general rate case (GRC) based on the assumed sales under normal weather conditions. It does not reflect revenue volatility caused by weather or consumer behavioral changes over time. When the rate year begins, revenue will fall short if the sales do not pan out due to warm winters, cool summers, conservation effects or other factors; on the other hand, a utility may obtain more revenue than authorized because of cold winters, hot summers and other reasons that cause consumption to increase. Under a revenue decoupling mechanism, a utility is allowed to recover a "fixed" amount of revenue regardless of its sales. By doing so, regulators remove a utility's throughput incentive and, accordingly remove the disincentive to pursue conservation achievement aggressively. Furthermore, decoupling reduces the utility's revenue volatility and provides a better opportunity for the utility to recover its fixed costs during a time period characterized with flat load growth yet increasing fixed costs.

Q. Under what authority does the Commission adopt revenue decoupling mechanisms?

A. RCW 80.28.260 provides the Commission with the discretion to adopt a variety of regulatory mechanisms to provide financial incentives for energy efficiency

programs.[1] In its policy statement on decoupling, the Commission stated that the financial protection of utilities from conservation-related earnings erosion is consistent with the Commission's ongoing statutory obligation to set rates for investor-owned utilities (IOUs) that are just, fair, reasonable and sufficient regardless of the rate making policies used to achieve that protection.[2]

Q. Could you summarize the Commission's implementation of revenue decoupling in Washington?

A. Yes. In 2013, the Commission approved the first full decoupling mechanism for Puget Sound Energy (PSE).[3] In the years that followed, the Commission approved similar revenue decoupling mechanisms for Avista Corporation,[4] Pacific Power & Light Company,[5] and Cascade Natural Gas Corporation.[6] In 2017, the Commission renewed PSE's decoupling mechanism with some modifications.[7] I have summarized the detailed designs of each decoupling mechanism in my Exhibit JL-2.

[1] Specifically, RCW 80.28.260 (3) provides that [t]he commission shall consider and may adopt other policies to protect a company from a reduction of short-term earnings that may be a direct result of utility programs to increase the efficiency of energy use. These policies may include allowing a periodic rate adjustment for investments in end use efficiency or allowing changes in price structure designed to produce additional new revenue.

[2] *In Re the Wash. Utils. & Transp. Comm'n's Investigation into Energy Conservation Incentives*, Docket U-100522, Report and Policy Statement on Regulatory Mechanisms, Including Decoupling, to Encourage Utilities to Meet or Exceed Their Conservation Targets, 4, ¶ 6 (Nov. 4, 2010) (Decoupling Policy Statement).

[3] *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy, Inc.*, Dockets UE-121697, UG-121705, UE-130137, and UG-130138, Order 07 (Jun. 25, 2013).

[4] *Wash. Utils. & Transp. Comm'n v. Avista Corporation, d/b/a Avista Utilities*, Dockets UE-140188 and UG-140189, Order 05 (Nov. 25, 2014).

[5] *Wash. Utils. & Transp. Comm'n v. Pacific Power & Light Company*, Docket UE-152253, Order 12 (Sept. 1, 2016).

[6] *Wash. Utils. & Transp. Comm'n v. Cascade Natural Gas Corporation*, Docket UG-152286, Order 04 (Jul. 7, 2016).

[7] *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy*, Dockets UE-170033 and UG-170034, Order 08 (Dec. 5, 2017) (2017 PSE Order).

While these decoupling mechanisms all adopt the same basic framework, they each contain their own nuances resulting from the unique circumstances of each utility, the varying degrees of institutional experience at the point in time each mechanism was initiated, and other factors. Some components have been modified as we gain a better understanding of how the mechanisms have worked over time and as we become acquainted with industry best practices.

Q. Can you please briefly summarize the Company's proposed decoupling mechanism?

A. Yes. The Company proposed a full decoupling mechanism[8] very similar to those the Commission has approved for other utilities (please refer to Exhibit JL-2 for a comparison). In a nutshell, the Company adopts an approach that establishes a temperature-normalized revenue per customer. Under this proposed approach, in each rate year the Company would compare the normalized, allowed revenue to the actual revenue on a monthly basis and defer the difference to its balance sheet. [9] Following a prudence review, the balance would be amortized over the following decoupling year.[10] The Company would apply the Federal Energy Regulatory Commission interest rate to the decoupling balance.[11]

[8] Decoupling mechanisms can take many forms. They may address revenue fluctuations due to weather only, due to conservation effect only, or they may address all fluctuations regardless of cause. "Full decoupling" refers to the all-encompassing form.
[9] Walker, Exh. KTW-1T at 12:18 - 13:1.
[10] *Id.*
[11] Walker, Exh. KTW-1T at 13:1-4.

IV. UNCONTESTED COMPONENTS OF THE COMPANY'S PROPOSAL

Q. What are the primary uncontested components of the Company's decoupling proposal?

A. The primary uncontested components of the Company's decoupling proposal are:

1. Revenue per customer calculation
2. Earnings sharing mechanism
3. Five percent soft cap

A. Revenue per Customer Approach

Q. What are the options to determine "Allowed Revenue" in the decoupling mechanism?

A. There is more than one approach to determining utility revenue in a decoupling mechanism. For example, the Regulatory Assistance Project compiled a number of options to develop the authorized revenue, including "fixed revenue" (i.e., fixed at the rate case revenue requirement), stair-step (as part of a multi-year rate plan), indexing, revenue per customer, periodic review for attrition, K factor, and hybrid.[12] This Commission has so far adopted the revenue per customer approach for all of the decoupling mechanisms it has approved, with two exceptions.[13]

[12] Migden-Ostrander J. and Sedano, R. *Decoupling Design: Customizing Revenue Regulation to Your State's Priorities*, Montpelier, VT: Regulatory Assistance Project (Nov. 2016), p.7 (available at: http://www.raponline.org/wp-content/uploads/2016/11/rap-sedano-migdenostrander-decoupling-design-customizing-revenue-regulation-state-priorities-2016-november.pdf).

[13] (1) For the period of July 2013 through December 2017, the Commission authorized the combination of K factor and revenue per customer for PSE. (2) In the 2017 PSE Order, the Commission authorized the decoupling mechanism for PSE's fixed production revenue based on a fixed dollar amount.

Q. Why does Staff support a revenue per customer approach?

A. Staff supports the revenue per customer approach because, combined with the earnings sharing provision and limited authorization period, this approach strikes a balance between protections for the business and protections for the ratepayers. If our goal is to provide revenues consistent with the Company's cost of providing service over time, we cannot ignore the fact that there are incremental costs associated with serving new customers. A revenue per customer approach recognizes this fact; it appropriately allows a scaling of revenues as customer counts change, thus providing the company fair compensation for incremental costs associated with serving each additional customer.

At the same time, the earnings sharing mechanism and the limited authorization period protect ratepayers by providing for refunds if the Company over-earns and by allowing for adjustments (including termination) if the mechanism is grossly imbalanced or is otherwise not functioning as intended. In between rate cases, if the utility achieves a higher-than-authorized rate of return, it is required to share half of the excess earnings with customers. After the decoupling mechanism operates for the prescribed time horizon, the utility must request renewal of the mechanism, thus requiring the utility to bear the burden of showing the continued need for the decoupling mechanism.

Q. Does Staff always support the revenue per customer approach regardless of specific circumstances?

A. Not necessarily. Staff supports the revenue per customer approach when analysis of historical data demonstrates there is a clear correlation between customer count and the overall cost of providing service.[14] As in past cases, in this case Staff has validated the revenue-per-customer approach by confirming this correlation. This validation is described in more detail, below.

Q. Did you analyze the relationship among NW Natural's rate base, expense and customer growth in this general rate case?

A. Yes, I did. The data are presented in Exhibit JL-3. Between 2013 and 2018, the Company's customer base was growing at an annual rate of 2.9 percent. However, the increase in rate base, operating and maintenance (O&M) expense, both over 7 percent, far outpaced customer growth. Per-customer O&M expense between 2013 and 2018 has trended upward with a compound annual growth rate of 4.6 percent.

The data clearly indicate that, even though the Company gained revenue from customer growth, the average per-customer revenue is insufficient to cover the average per-customer cost. In other words, the data indicate that without an approach that scales with customer count, the Company will not be adequately compensated for the incremental cost to serve each additional customer.

[14] In PSE's 2017 GRC, Staff found that the data supported a different approach. After analyzing the relationship among PSE's production cost, rate base and customer growth over time, Staff recommended that the Commission set the allowed decoupled revenue for PSE's electric production decoupling mechanism at the fixed level determined in the GRC. The approach was adopted in the multiparty settlement and approved by the Commission. 2017 PSE Order, Appendix B to Final Order, Multiparty Settlement Stipulation and Agreement at 31, ¶¶ 113–114.

Q. What other data support your view that the incremental cost of serving additional customers keeps up with or even outpaces the incremental revenue?

A. As shown in my Exhibit JL-4, it costs $476 to $518 each year to serve a new residential customer. In comparison, the average revenue generated with each additional residential customer under the decoupling mechanism will be $226 for Schedule 1 residential customers and $416 for Schedule 2 residential customers. This disparity between cost and revenue demonstrates that the additional cost associated with serving each customer far exceeds the additional revenue the Company would receive from each new customer.

Q. What is Staff's position on a revenue per customer approach based on the information above?

A. Staff supports the revenue per customer approach given the facts in this record. Even though there may be found margin associated with new customers, it is not sufficient to cover the incremental costs to serve those new customers. Staff believes it is appropriate to recognize the incremental cost associated with serving those customers, and to provide a mechanism that helps recover those costs.

Q. Would a "fixed revenue" approach be appropriate for NW Natural?

A. No. The "fixed revenue" approach does not recognize the cost associated with serving new customers. Such an approach is likely to exacerbate regulatory lag as it fails to account for correlations between customer count and cost of service.

B. Earnings Sharing Mechanism

Q. What is the earning sharing mechanism that the Company proposed?

A. As part of its decoupling proposal, the Company proposed a sharing mechanism in which it will share 50% of before tax operating revenues in excess of the Company's authorized rate of return; and the revenue will be shared on an equal cent per therm basis with decoupled customers.[15]

Q. What is Staff's position on the proposed earnings sharing mechanism?

A. Staff supports the proposal. It is the same sharing mechanism that all of the other IOUs have implemented in Washington. Staff believes that earnings sharing is a necessary safeguard for ratepayers that goes hand in hand with the revenue per customer approach. Under a properly designed decoupling mechanism, the Company has more certainty in recovering its fixed costs because rate payers in the decoupled groups now are responsible for smoothing out year-over-year revenue fluctuations. If excess earnings above the authorized rate of return are achieved, due to the Company's internal efficiency gains, a favorable external economic environment, or other factors, the decoupled customers should share half of the excess earnings.

[15] Walker, Exh. KTW-1T at 14:1-16.

C. Five Percent Soft Cap

Q. What did the Company propose to address potential rate shock due to high decoupling surcharges?

A. The Company proposed to apply a five percent soft cap to mitigate customer rate increases associated with a decoupling mechanism.[16] Any decoupling surcharges that would result in a rate increase of five percent or more would remain on the Company's balance sheet, effectively capping decoupling rate increases at five percent in any given year.[17] The unrecovered deferral balance would be included in rates the following year, subject again to the cap.[18] The cap does not apply to decoupling credits that result in a customer rate decrease.[19]

Q. Do you agree with the proposed five percent soft cap?

A. Yes. As shown in my Exhibit JL-2, the Commission has authorized three percent or five percent caps for various decoupling mechanisms. Staff supports a five percent soft cap for gas decoupling mechanisms as a well-balanced option. In general, natural gas sales are very weather-dependent. As we learned from the first round of PSE's gas decoupling mechanism, a soft cap of three percent can become problematic under abnormal weather conditions. If we experience a few consecutive warm winters in which a utility sells less gas than it would have sold under normal weather, the decoupling deferral under a low soft cap may not be cleared, pushing

[16] Walker, Exh. KTW-1T at 17:7-13.
[17] *Id*. at 17:15-18.
[18] *Id*. at 17:18-19.
[19] *Id*. at 17:19-20.

uncollected amounts out to the next year which, itself, may generate a deferral balance in excess of the soft cap. In other words, a low soft cap can cause the deferral balance to snowball quickly in a surcharge direction. Prolonging the recovery of decoupling deferral over multiple years disrupts alignment of cost causation and cost recovery, and sends confusing pricing signals to customers.

Furthermore, Generally Accepted Accounting Principles (GAAP) require that revenues accrued in connection with a revenue recovery mechanism must be collected in cash within 24 months following the end of the annual period in which they are recognized.[20] A snowballing deferral balance under a low soft cap creates uncertainty with respect to whether or not deferred expenses will be recovered within that 24 month period, in turn creating revenue recognition issues on the company's financial statements. A slightly higher soft cap, five percent in this case, would help alleviate revenue recognition issues while still providing protection against rate shock.

V. MODIFICATIONS TO THE COMPANY'S PROPOSAL

Q. Did the Parties make any modifications to the Company's decoupling proposal?

A. Yes. The Parties agreed to modifications to the Company's proposed decoupling mechanism, and they are itemized in the Joint Testimony. Briefly, the modifications specify how to calculate actual revenues, limit the mechanism to five years,

[20] ASC 980-605-25-4 (Regulated Operations Revenue Recognition).

explicitly include residential customers on Rate Schedule 3, and separately decouple the commercial customers on Rate Schedules 1 and 3.

I discuss each of these topics, and Staff's support thereof, below.

Q. Please explain the Company's initially proposed method for calculating "actual revenue."

A. The Company proposed a simple weighted average margin rate for decoupled groups to derive margin revenue, as shown in Exhibit KTW-3.[21] Because some decoupling groups consist of multiple schedules with different margin rates and some schedules have tiered block rates, the Company proposed to develop weighted average group margin rates for each decoupled group.[22] The "actual revenue" in any given month would then be calculated as the average group margin rate multiplied by the actual volumetric sales. The Company proposed to update the decoupling group margin rates each year in a decoupling true up filing to capture year-over-year changes in weather-normalized volumes.[23]

Although this is the Company's practice in Oregon, Staff was concerned that the actual revenue derived from the average group rate may deviate from the actual billed revenue.

Q. Please explain the modified method of calculating actual revenue and why Staff supports it.

[21] Walker, Exh. KTW-1T at 11:7-8.
[22] Calculated as the group margin revenue divided by temperature-normalized volumes.
[23] Footnote at the very bottom of Exh. KTW-3.

A. Based on prior experiences with other decoupling mechanisms, Staff prefers to calculate "actual revenue" using the tariff rates from applicable rate schedules and the actual billing determinants. Even though the Company's proposed method will arrive at similar "actual revenue" figures, Staff believes the approach the Parties have agreed to is more transparent and will avoid potential disputes on weather-normalized sales during the annual decoupling true up filing. This approach is consistent with the approach used for all other Washington gas utilities.

Q. Please explain the proposed and modified authorization period for the decoupling mechanism.

A. The Company initially proposed that the decoupling mechanism be established on a permanent basis.[24] However, the Settlement Agreement establishes the decoupling mechanism for a period of five years, from November 1, 2019 to October 31, 2024. The Company will need to request reauthorization for the continuation of the decoupling mechanism, either in the context of a GRC or as a separate petition before the authorization expires.

Q. Please explain why Staff supports a five-year time frame for the decoupling mechanism.

A. First, a five-year authorization of the mechanism reflects Staff's understanding of the Commission's decoupling policy.[25] It is also consistent with the Commission's

[24] Walker, Exh. KTW-1T at 16:13-14.

[25] "The Commission will generally approve a full decoupling mechanism for the period required to achieve its objectives or until the filing of a utility's next general rate case. Under either circumstance, the burden is upon the utility to demonstrate the continued need for the mechanism." Decoupling Policy Statement at 19, ¶ 28.

decisions on other decoupling mechanisms in Washington, as shown in Exhibit JL-2. Furthermore, the justification for a revenue-per-customer full decoupling mechanism may erode or it may require reconsideration depending on the circumstances, including customer growth, load growth and cost of service. By authorizing an initial five-year period, the Commission would be allowing the mechanism to operate for a long enough time period to conduct a proper evaluation of how well it is functioning. Additionally, by establishing an end date for this first iteration of NW Natural's decoupling mechanism, the Commission is provided with an opportunity to adjust design elements within the mechanism and, if warranted, it can allow revenue decoupling to expire at the end of the five-year period with no action required.

Q. Please explain the settlement term that provides for combining residential customers on Schedule 3 with commercial customers on Schedule 3.

A. In the Company's initial filing, residential customers on Schedule 3 were not included in the decoupling calculation. The typical customer on this schedule is a multifamily dwelling unit, such as an apartment complex, with one meter. Those customers are considered Schedule 3 commercial customers for billing purposes but are flagged as residential for operational safety purposes. The Company clarified in its response to Staff discovery that it had intended to include them.[26] This term of the settlement is to memorialize this point.

[26] NW Natural's response to UTC Staff Data Request No. 159 states that "Residential customers on schedule 3 were not included in the decoupling calculations in the proposed mechanism. Residential customers on schedule 3 get billed under commercial schedule 3 and only get flagged as residential for safety type notifications.

Staff supports including those multi-family residential customers on Schedule 3 in the decoupling mechanism as the Company's revenues from those customers are subject to the influence of conservation and weather variation, fitting the rationale for decoupling. Also, those customers are billed the same rates as all other commercial customers on Schedule 3 and their average usages are very close, further arguing for inclusion in the decoupling mechanism as a single, combined group.

Q. Please explain why Staff supports the settlement term that places Schedule 1 commercial customers and Schedule 3 commercial customers into separate decoupling groups.

A. Although all of the customers on these schedules are commercial customers, the two groups have distinct characteristics. The Company initially proposed to put all commercial sales service customers under Schedules 1 and 3 (referred to below as C1 and C3, respectively) into one group for decoupling purposes. However, the Parties have agreed to keep them as separate decoupling groups.

Staff supports maintaining the separation because, even though they are both commercial customer groups, they have distinct usage characteristics. C1 customers are typically low usage customers who do not use gas for space heating while C3 customers are higher usage customers that are more temperature sensitive than C1

Generally, these customers are apartment buildings or condos that have one meter for many living units. It was the Company's intention to include these customers within the proposed decoupling mechanism."

customers and that typically do use gas for space heating.[27] On average, C3 customer usage is more than double that of C1 customers. If we combine customers with different usage characteristics into one decoupling group, we risk one group cross-subsidizing the other. Therefore, in general, Staff supports separate groupings for heterogeneous customers as long as there are enough customers in each group to moderate rate fluctuation.[28]

VI. CONCLUSION

Q. In conclusion, what is your recommendation?

A. I recommend the Commission approve the proposed decoupling mechanism, as modified by the Decoupling Agreement, as it reflects best practices we have learned over the years, it is consistent with decoupling mechanisms the Commission has approved for other utilities, and it is consistent with the Commission's articulated policy on decoupling.

Q. Does this conclude your testimony?

A. Yes.

[27] KSM-WP4, tab "Commercial Models". The annual weather-normalized usage for C1 and C3 customers are 1,240 and 2,815 therms, respectively, after removing conservation savings from usage per customer estimates. The Company's weather normalization regression analyses show that C1 group has a heat sensitivity coefficient of 0.29 therm/premise/heating degree day whereas C3 group has a coefficient of 0.63. Bigger coefficients indicate higher sensitivity to temperature variation.

[28] As part of the settlement, Staff does not object to the Company's proposal to put Schedule 41 and 42 commercial and interruptible customers together into one decoupling group. Schedule 42 has very few customers. Separating out Schedule 42 customers as a stand-alone decoupling group may cause large rate fluctuations as customers leave or join the group.