

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: March 8, 2016

REGULAR _____ CONSENT X EFFECTIVE DATE March 9, 2016

DATE: March 2, 2016

TO: Public Utility Commission

FROM: Lance Kaufman 

THROUGH:  Jason Eisdorfer and  Marc Hellman

SUBJECT: NORTHWEST NATURAL: (Docket No. ADV 211/Advice No. 16-02):
Revises Rule 24, Gas Quality Standards and Determination of Thermal
Units, to identify the weather stations currently used by Northwest Natural
to measure temperature.

STAFF RECOMMENDATION:

Staff recommends the Commission approve Northwest Natural's (Company) Second Revision of Sheet RR-24.1 General Rule 24 "Gas Quality Standards and Determination of Thermal Units (continued)" with an effective date on and after March 9, 2016.

ISSUE:

Rule 24 in the Company's Tariff Sheets does not accurately reflect the weather stations used by the Company for weather data. This filing updates Rule 24 to reflect the weather stations actually used by the Company. This issue does not affect customer rates or Company revenues.

APPLICABLE LAW:

Under ORS 757.205 and 860-022-0005(2), NW Natural must file the rules and regulations that in any manner affect the rates charged or to be charged or define the extent or character of the service to be given shall be included with each tariff. Under ORS 757.225, NW Natural must charge customers in accordance with its tariff.

DISCUSSION AND ANALYSIS:

Proposed tariff revision

NW Natural's Rule 24 identifies the eight weather stations NW Natural uses to obtain temperature data for the eight weather zones in the Company's Oregon service territory. In this filing, NW Natural substitutes different weather stations for two of eight weather zones: Albany and The Dalles. These substitutions modify Schedule 24 so that it accurately reflects the weather stations actually used to establish normal temperatures and perform heating degree day calculations for the Company's last Oregon general rate case (Docket UG 221), and that are still in use today.

In the course of a limited investigation into NW Natural's WARM, Staff identified the discrepancy between the weather stations identified in NW Natural's Rule 24 and those actually used by NW Natural. NW Natural explains that it began using "replacement weather stations" for the Albany and The Dalles weather zones in 2005. NW Natural's current rates and heating degree calculations are based on weather data from these "replacement" weather stations. NW Natural states that updating Rule 24 to list the weather stations actually used for the purpose of calculating and implementing current rates has no affect on customers.

Staff agrees with NW Natural that it is appropriate to correct Rule 24 to reflect the weather stations actually used by NW Natural. Staff also agrees that because NW Natural's rates are based on data from the replacement weather stations, the proposed change to Rule 24 has no impact on current rates.

Analysis of past billings under Rule 24

NW Natural's proposed schedule change raises a separate issue—whether customers were harmed when Rule 24 did not reflect the weather stations actually used for weather data, which was between 2005 and 2012. During this period, the weather data used to calculate rates were from the weather stations listed in Rule 24. However, the day-to-day weather data used to implement the rates was from the two "replacement" weather stations. The mismatch affected multiple aspects of customer bills. However, Staff's review indicates that the mismatch did not have a net negative impact on customers.

In the Company's 2002 rate case (UG 152), the Company used the NOAA weather stations for test year calculations that are currently listed in Rule 24 that are being replaced in this current filing. In 2005 the Company changed the weather stations for two weather zones, Albany and The Dalles. NW Natural made this change because the

NOAA stations for these locations were experiencing delays in publishing weather observations.

Rule 24 allows the Company to use substitute weather stations when the data from the tariffed weather station is unavailable or unreliable. Rule 24 specifies that to the extent the Company uses the replacement weather station because data from the listed weather station is "continually unavailable or unreliable," the normal weather heating degree days for the replacement station will be adjusted so that the data used for the replacement weather station remains aligned with the data used to determine normal weather in the Company's last general rate case.

If at any time the daily temperature data is not available for any of the listed weather stations, the Company will use data from a substitute station within the respective weather zone, and will adjust the data for the high and low temperature differential between the two stations. In the event that temperature data for any weather station is continually unavailable or unreliable, the Company will select a replacement weather station within the respective weather zone. When a replacement weather station is established, the normal weather heating degree days for the replacement station will be adjusted so that the data used for the replacement weather station remains aligned with the data used to determine normal weather in the Company's last general rate case.

Although the Company began using the replacement weather stations on a permanent basis, the Company did not adjust the normal weather data used for the 2002 rate case. The Company chose to not align the data because the replacement stations were close to those used in the previous rate case. This was a violation of Rule 24.

This mismatch affected three distinct mechanisms that utilize actual weather in calculating customer bills: WARM adjustments, decoupling deferrals, and billing factors.

Both the WARM and decoupling calculations rely on a process of weather normalization. This process involves adjusting actual usage to account for abnormal weather. Abnormal weather affects WARM and decoupling calculations in roughly equal and opposite directions at the company level. Although it is not possible to calculate with great precision, based on some simplifying assumptions and the data available, WARM participants in The Dalles weather zone may have been overbilled by a total of approximately \$800,000, between 2005 and 2012 as a result of the weather station change, compared to what they would have been billed if the weather station were not modified (and assuming that the data from the prior weather station could have been obtained and used for billing purposes). Using the same simplifying assumptions and available data, WARM participants in Albany may have been under billed by \$167,000.

Using the assumptions and limited data described above, the table below provides a summary of the WARM impact of the weather station change by customer class for the two weather zones implementing alternative weather stations. Industrial customers are not eligible for WARM.

Table 1 Additional WARM Charge (Credit) Due to Weather Station Change

	Albany		The Dalles	
	Residential	Commercial	Residential	Commercial
2005-2008	\$100,165	\$14,968	(\$88,725)	(\$93,814)
2009-2010	(\$72,853)	(\$41,674)	(\$130,642)	(\$108,405)
2011-2012	\$129,307	\$37,385	(\$239,761)	(\$140,883)

The overbilling of The Dalles customers was largely offset by a decrease in the Company's decoupling deferrals. The equations below compare the Decoupling Mechanism with the WARM adjustment.

$$\begin{aligned}
 (\text{Actual Use} - \text{Weather Adj.} - \text{Base Use}) * \text{Dist. Margin} &= \text{Decoupling Deferral} \\
 \frac{\partial \text{Decoupling Deferral}}{\partial \text{Weather Adj}} &= -\text{Dist. Margin} \\
 \text{Weather Adj.} * \text{Dist. Margin} &= \text{WARM Adj.} \\
 \frac{\partial \text{WARM Adj.}}{\partial \text{Weather Adj}} &= \text{Dist. Margin}
 \end{aligned}$$

A one unit change in actual measured temperature affects the Weather Adjustment equally for the Decoupling Deferral and the WARM Adjustment. The Weather Adjustment has an equal and opposite impact on the Decoupling Deferral and the WARM Calculation.

While the two mechanisms offset each other at the Company level, they do not offset at the customer level. The estimated over-collection occurred primarily in The Dalles, while the offsetting impact through the decoupling mechanism was spread across all customers in the respective schedules. This resulted in a net increase in bills for The Dalles customers, and a net decrease in bills for customers in the other NW Natural weather zones. Also, approximately 10 percent of customers that are eligible for WARM do not participate in WARM. Accordingly, the decrease in Decoupling deferrals as a result of the alternate weather stations was likely larger than the increase in WARM adjustments by about 10 percent.

In addition to the WARM and Decoupling calculations, actual temperature is used to calculate customer specific billing factors. The billing factor is fully described in Rule 24.

Gas is generally metered in volume. Customers are billed in therms. The conversion of volume to therms depends on the density of the gas. The density of gas depends on temperature and pressure, which vary based on customer location. The billing factor is a number that is multiplied by the customer's metered usage to account for variation in the density of metered gas.

The majority of NW Natural customers have meters that automatically adjust for temperature. These customer's billing factors do not include temperature. For customers that do not have automatically adjusting meters, higher recorded temperatures decrease the billing factor and decrease the volumetric charge on customer's bills. During the period in question the replacement weather station for The Dalles measured on average nine tenths of a degree warmer than the tariffed station. The average weather temperature measured at the replacement weather station for the Albany zone was one tenth of a degree warmer than that at the tariffed station. If the weather data for the tariffed station had been available for billing it would have resulted in a decrease of the billing factor of approximately 0.18 percent in The Dalles zone and approximately 0.02 percent in the Albany zone.

In correspondence with Staff, the Company states that although the Billing Factor formula does take into account temperature as one of the components, it does not involve a comparison between normal and actuals. The tariff does not contain a mechanism to account for billing factor misalignment between alternate weather station data and rate case billing determinants. Because of this Staff finds that the alternate weather station provisions in Rule 24 are not intended for permanent, long term replacement of the rate case stations.

Staff is continuing to analyze the historic billing issue discussed above, the related rules and laws, and whether a separate investigation is warranted given these considerations. Staff finds that the current filing is clearly appropriate, regardless of the outcome of Staff's review of the prior billing issues.

CONCLUSION:

The Company's current Rule 24 does not accurately reflect all the weather stations the Company uses for weather data for rates. Staff supports this filing because it updates NW Natural's Rule 24 to correctly identify the weather stations used by NW Natural for both observations and to calculate NW Natural's current rates and adjustments. The proposed revision has no impact on current rates or charges.

Rule 24 requires appropriate adjustments to account for deviations between the listed stations and any alternate stations. The Company did not follow this requirement for the period between 2005 and 2012. Overall, however, the Company does not appear to have received financial benefit as a result of using alternate weather stations.

Further, Staff concludes that the Rule 24 provision allowing NW Natural to use alternate weather stations is not appropriate for long-term replacement of the rate case stations. If the Company wishes to rely on this provision for long-term weather station replacement in the future, the weather data adjustment mechanism should be clarified and the Company should show that the mechanism is effective in preventing harm to customers.

PROPOSED COMMISSION MOTION:

Approve Northwest Natural's (Company) Second Revision of Sheet RR-24.1 General Rule 24 "Gas Quality Standards and Determination of Thermal Units (continued)" with an effective date on and after March 9, 2016.