



Janet P. Kennedy
Vice President, Regulatory Affairs & Gas Supply

Pacific Northern Gas (N.E.) Ltd.
2550 - 1066 West Hastings Street
Vancouver, BC V6E 3X2
Tel: (604) 691-5680
Fax: (604) 697-6210
Email: jkennedy@png.ca

Via Web Upload and Courier

April 26, 2018

B.C. Utilities Commission
Suite 410 - 900 Howe Street
Vancouver, BC V6Z 2N3

File No.: 4.2.7 (2018)

Attention: Patrick Wruck
Commission Secretary and Manager, Regulatory Support

Dear Mr. Wruck:

**Re: Pacific Northern Gas (N.E.) Ltd.
Tumbler Ridge Division
2018-2019 Revenue Requirements Application
PNG(NE) Responses to BCOAPO IR No. 1**

Accompanying, please find responses to the above noted Information Requests uploaded to the Commission's website earlier today.

Printed copies of the responses will be distributed by courier on Friday, April 27, 2018, including 10 copies to the Commission's office and a single copy to each of the parties noted below who registered as interveners into this Application.

Please direct any questions regarding these applications to my attention.

Yours truly,

A handwritten signature in black ink that reads 'Janet Kennedy'.

J.P. Kennedy

cc. Leigha Worth (BCPIAC) – BCOAPO
James Wightman (BCPIAC) – BCOAPO

REQUESTOR NAME: BCOAPO *et al.*
INFORMATION REQUEST ROUND NO: #1
TO: PNG NE Tumbler Ridge (TR) Division
DATE: April 12, 2018
APPLICATION NAME: 2018-19 Revenue Requirements Application

1.0 Reference: Exhibit B-1-1, Amended Application, pages 19 and 34, Administrative & General Expenses

The first referenced page states:

Administrative & General Expenses

The decrease reflects the lower forecast pension and non-pension post-retirement Benefits due to a decrease in the discount rate from 3.81% in the Original Application to 3.60% in the Amended Application, as well as the recognition of actuarial gains in the plans in 2017 impacting lower pension obligations and resultant pension expense for 2018.

The second referenced page states:

Defined Benefit (DB) pension and non-pension post-retirement benefit (NPPRB) Program costs are actuarially determined. Amounts presented in the table above reflect an updated valuation completed at December 2017. The decrease in DB and NPPRB costs for Test Year 2018 and Test Year 2019 over Decision 2017 are primarily a result of discount rates going down (3.81% to 3.60%) and as a result of actuarial gains in the plans recognized at the end of 2017. This caused lower pension and benefit obligations at the end of 2017, and therefore less expense for Test Year 2018 and Test Year 2019.

- 1.1 Can PNG NE confirm that a decrease in the discount rate would be expected to increase pension and non-pension post-retirement benefits costs in 2018 and 2019? If so, please explain why both cited references claim otherwise; if not, please explain why not.

Response:

Confirmed. While the reduction of the discount rate applied in the actuarial valuation (3.81% to 3.60%) has an adverse impact on DB and NPPRD costs for Test Year 2018 and Test Year 2019, this is more than offset by actuarial gains in the plans recognized at the end of 2017. PNG(NE) apologizes for the lack of clarity on this matter in the Amended Application.

2.0 Reference: Exhibit B-1-1, Amended Application, pages 22-23, Demand Forecast

On page 22, the Application states:

PNG(NE)'s methodology for forecasting customer demand, including forecasts of Residential and Small Commercial Use per Account (UPA), is consistent with that applied in prior years.

- 2.1 Please provide a high-level discussion with respect to PNG NE's UPA forecasting methodology, indicate when this methodology was first approved, and identify any changes in PNG NE's methodology as compared to the originally approved methodology.

Response:

PNG(NE)'s current methodology for forecasting Residential and Small Commercial Use per Account (UPA) was first approved under BCUC Order G-71-04 having regard to its 2004 Revenue Requirements Application. Prior to 2004, the linear trend of historical use per account was used to forecast UPA. The current methodology utilizes the midpoint of the most recent year normalized use per account and the linear trend with the linear trend being a simple regression of normalized use per account against time. Over the years, this methodology has remained the same with the only adjustment being the amount of historical data used in the linear trend analysis. For example, in 2004, seventeen historical data points were included in the linear trend whereas in recent years starting in 2013, the five data points preceding the test year are now utilized.

- 2.2 Tables 10 and 11 both refer to "Normalized Use per Account." Can PNG NE confirm that these UPA forecasts are weather normalized?

Response:

PNG(NE) confirms that the UPA forecasts are weather normalized.

- 2.3 If not provided as part of the response to 2.1 above, please provide a high-level discussion with respect to PNG NE's normalization methodology, indicate when this methodology was first approved, and identify any changes in PNG NE's methodology as compared to the originally approved methodology.

Response:

Please see the response to Question 2.1.

3.0 Reference: Exhibit B-1-1, Amended Application, page 24, Table 14, Company Use Gas Cost, Unaccounted for Gas

- 3.1 In PNG NE's view, what are the drivers of the volatility in actual unaccounted-for gas for the years 2014-2017 inclusive?

Response:

The primary driver of the month-to-month variation in UAF volumes is the estimate of the unbilled consumption of residential and small commercial customers: that is the consumption between when customers' meters were last read, and the end of the calendar month. Such estimates are reversed in the following month. Consequently, if the unbilled consumption is under-estimated in a particular month, leading to an increase in the UAF loss (all other factors aside), then the reversal of that estimate leads to a reduction in the UAF loss (again, all other factors aside). For this reason, PNG(NE) generally does not examine isolated occurrences of high monthly UAF losses, since these often reverse to UAF gains in the following month. Instead, PNG(NE) monitors the UAF for trends lasting at least three months.

Additional drivers of the month-to-month variation in UAF volumes are physical losses of gas and measurement errors, although these are generally not significant. Measurement errors are generally systemic, introducing a constant level of error and only contribute to the month-to-month variation in UAF volumes when the meters are recalibrated.

- 3.2 Please describe any steps that PNG NE has taken to minimize unaccounted for gas volumes.

Response:

PNG(NE) remains diligent in its monitoring of its gas accounting practices affecting the determination of the monthly UAF volumes. PNG(NE) generally does not examine isolated occurrences of high monthly UAF losses, since these often reverse to UAF gains in the following month. Instead, PNG(NE) monitors the UAF for trends lasting at least three months.

PNG(NE)'s estimate of unbilled consumption of its residential and small commercial customers is based on the correlation of monthly billed consumption and monthly average temperatures. While PNG(NE) does record daily temperatures in its service areas, it does not record daily consumption of any but a handful of its larger customers. Developing an estimate of unbilled consumption that may better reflect the coldest ambient temperatures is not readily practicable without daily, or even hourly, metered consumption data from residential and small commercial customers, and improved knowledge of the gas appliances installed by those customers.

PNG intends to undertake a pilot installation of approximately 1,650 advanced metering units in its PNG-West service area in order to evaluate the benefits of Automated Meter Reading (AMR) infrastructure. The cost of this limited implementation is budgeted at \$188 thousand. Data from

these meters is expected to provide more information on the correlation between daily customer demand and ambient temperatures that is applicable to PNG(NE).

In addition, PNG(NE) would need to initiate a customer end use survey in order to understand better, the efficiencies of the gas appliances, and building characteristics associated with the AMR installations. PNG(NE) last completed a Residential End Use Survey (REUS) in 2015 at a cost of approximately \$60 thousand, shared by both PNG and PNG(NE).

Finally, PNG(NE) would need to engage a consultant to undertake a statistical analysis in order to refine its customer end use model and unbilled consumption estimation method, all of which would then be based on a small sample of customers located in one geographic location.

To summarize, PNG(NE) has identified opportunities for improving the quality of its customer information and revising its unbilled estimate. However, improvements to the unbilled estimate come at additional effort and cost, and are not expected to result in a significant improvement to the unbilled estimate.

In 2008, PNG completed an analysis of the theoretical and practical minimum UAF loss threshold applicable to the PNG-West system. The results of the analysis, presented in PNG's response to BCUC IR 1.4 in the proceeding related to PNG's 2008 UAF Loss Application determined a non-zero, theoretical minimum UAF loss threshold. While some of the drivers of UAF on the PNG-West system differ from those on PNG(NE), the conclusion PNG(NE) draws from the 2008 analysis is that a non-zero loss threshold is also applicable to PNG(NE) TR. Therefore, while further reductions in UAF volumes may be attainable to a point, such reductions are associated with expending additional resources and incurring additional costs.

PNG(NE) remains proactive in evaluating opportunities for improving its management of its measurement estimation processes. However, such opportunities come at a cost and PNG(NE) remains prudent in allocating any associated resources effectively and efficiently.

4.0 Reference: Exhibit B-1-1, Amended Application, page 29, Operating Expenses, and page 24, Table 14, Company Use Gas Cost

The first referenced page states:

2.3.8 1 Other - Including Account 673

The costs in this line include all other accounts not otherwise listed in the table, with the items primarily related to metering services (673). Costs for Test Year 2018 are forecast to be consistent with Decision 2017 and recent experience. Test Year 2019 costs are forecast to be \$9,000 or 7.1% greater than Test Year 2018, primarily due to a higher forecast for Company use gas.

4.1 Given that Table 14 shows a significant decrease in Company Use Gas requirements (in GJ) for 2018 and 2019 with respect to the 2017 Decision, are the increased 2019 costs solely attributable to a forecast of increased gas commodity costs in 2019? Please explain.

Response:

PNG(NE) submits that the increased company use commodity cost and decreased company use gas requirements in Test Year 2019 compared to Decision 2017 is mostly attributed to the increase in carbon tax rates by \$0.25 per GJ effective April 1, 2018 and by a further \$0.25 per GJ increase effective April 1, 2019 as illustrated in the company use cost breakdown provided below.

	Decision	Test Year	Test Year
	2017	2018	2019
Commodity Cost	\$ 35,062	\$ 30,992	\$ 35,837
B.C.S.S. Tax	\$ 2,453	\$ 2,169	\$ 2,509
Ice Levy	\$ 139	\$ 125	\$ 144
Carbon Tax	\$ 14,137	\$ 19,330	\$ 21,835
Total Company Use Gas Cost Commodity Costs	\$ 51,791	\$ 52,616	\$ 60,325
Company Use Requirements (GJ)	61,636	49,371	49,184

5.0 Reference: Exhibit B-1-1, page 54, Table 26, Capital Expenditures

The referenced table indicates that although the 2017 Decision approved 2017 capital expenditures of \$556K (including overhead), actual 2017 capital expenditures for 2017 were \$422K (including overhead). Net cap ex approved for 2017 was \$491K while actual net cap ex for 2017 was \$322K.

- 5.1 Please explain the large variance between 2017 approved and actual capital expenditures.

Response:

An analysis of the variance in capital expenditures for 2017 can be found in Exhibit B-1-1, Section 3.1.2 – 2017 Capital Expenditure Variance Analysis.

- 5.2 Did the underspend on capital expenditures in 2017 (relative to the approved amount) result in an over-collection in 2017 rates of the equity return and debt costs for 2017 by being based on a higher than actual 2017 rate base? If so, is there a mechanism to refund this 2017 over-collection to ratepayers? If not, please explain why not.

Response:

PNG(NE) agrees that the 2016-2017 underspend on capital expenditures would theoretically result in an “over-collection” in 2017 rates of the equity return and debt costs for that one component in PNG(NE)’s cost of service. PNG(NE) also notes that there are other components that form part of the rate base calculation. There is no mechanism to refund this noted “over-collection” of one component. In fact, PNG(NE) does not agree that this can be addressed in isolation, given the cost of service methodology by which PNG(NE)’s customer rates are determined.

In its bi-annual (and previously annual) rate applications, PNG(NE) provides its best estimates of forecast operating and capital expenditures and all other components in its cost of service and also provides its best estimate of forecast deliveries for all customer classes. Following a regulatory process, customer rates are approved taking into consideration these estimates either via a Commission Decision or a Negotiated Settlement Process. PNG(NE) submits that it would be virtually impossible for Actual results to be exactly as forecast and every year, there will be variances from actuals in the majority of components in the cost of service and in customer deliveries. Some components will be better than forecast and some components will be worse than forecast. And this will vary from year to year.

PNG(NE) also notes that Tumbler Ridge, as a very small division, is subject to substantial actual return fluctuations as a change in costs or revenues can have a material impact. The actual return on equity results for this division in the past have ranged from a loss on equity invested to a return in excess of three times the approved return. To focus on a particular event as warranting a refund is not consistent with the regulatory construct under which PNG(NE) operates.