

UNBILLED AND UNACCOUNTED-FOR GAS VOLUMES

Producing the UUF Forecast – 2017 Test Year

1. This evidence describes the forecast methodology and updates the forecast of Unbilled and Unaccounted-For Gas (“UUF”) for the 2017 test year. The 2017 UUF forecast of 106,257 10³m³ is a component of the 2017 volumes budget which is part of the annual volumetric adjustment approved by the Board’s EB-2012-0459 Decision with Reasons dated July 17, 2014.
2. The UUF forecast is produced using a two-step process involving the forecast of both Unaccounted-For Gas (“UAF”) and unbilled volumes. The 2017 UUF forecast is equal to the 2017 UAF forecast plus the difference between the forecast December 2017 and forecast December 2016 unbilled volumes (i.e., change in unbilled volumes). Both the UAF and unbilled volumes forecasts are generated using the same regression models as have been employed throughout the current Custom IR term, consistent with the agreement in the Settlement Proposal in the EB-2015-0114 proceeding (Exhibit N1, Tab 1, Schedule 1, page 8).
3. UAF data for years prior to 2005 have been transformed to calendar year format in order to produce a calendar year UAF forecast. For an explanation of the transformation of volumes from fiscal to calendar year format, please see EB-2006-0034, Exhibit C1, Tab 3, Schedule 1.

Unbilled Volumes

4. The Company uses a regression model to forecast the level of monthly unbilled volumes. The model relies on the high degree of correlation between volumes and degree days.

Witnesses: M. Kirk
D. Small

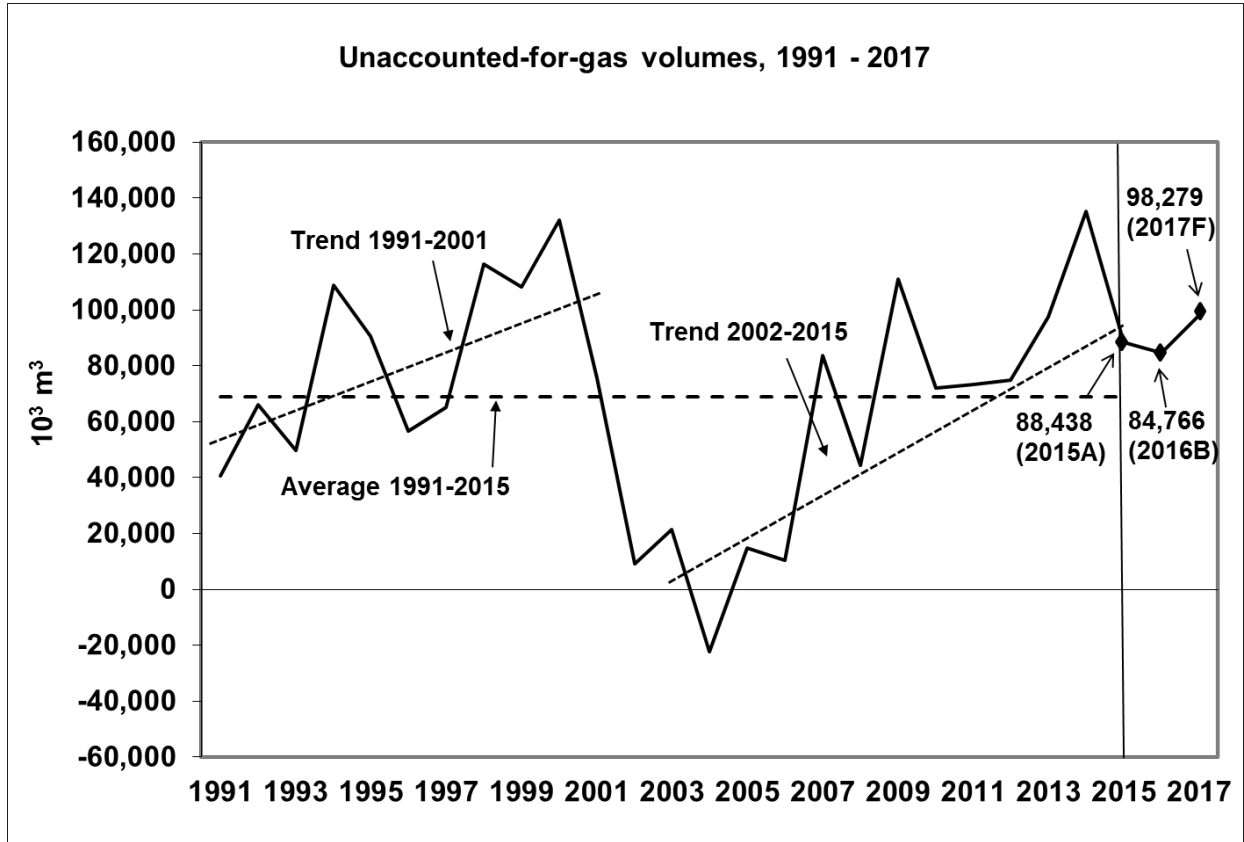
5. The change in unbilled volumes from December 2016 and December 2017 recognizes that at the end of any given year, a portion of volumes are captured in the current year that should reside in the previous year because billing does not reflect calendar months, and similarly, a portion of volumes are estimated in the following year that should reside in the current year. To net out the effects of both with the least administrative burden, the change in unbilled volumes is recorded annually in the same fashion.

Unaccounted For Gas Forecast ("UAF")

6. For the 2016 test year, the Company tested a variety of forecasting models and proposed to use the model that produced the most accurate and reasonable results. In the Settlement Proposal for EB-2015-0114, parties agreed that it is not appropriate to update UAF forecasting methodology during the Custom IR term. The Board approved the Settlement Proposal in its Decision and Order dated December 10, 2015. As a result, the model applied and approved as a part of the 2015 Rate Application (EB-2014-0276) will continue to be used for the remaining Custom IR term.
7. Figure 1 shows historical UAF data to 2015 along with the 2016 approved budget and the 2017 forecast. The graph also shows the 1991 to 2001 trend, the 2002 to 2015 trend line, and the 1991 to 2015 average.

Witnesses: M. Kirk
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Figure 1



8. Table 1 presents UAF actuals along with most recently approved Budget values.

Table 1
UAF Actuals vs Board Approved

<i>Col. 1</i>	<i>Col. 2</i>	<i>Col. 3</i>
Calendar Year	Actual	Board Approved
2011	73,355	64,211
2012	74,762	68,925
2013	97,361	73,092
2014	135,380	77,660
2015	88,438	81,519
2016	-	84,766

Witnesses: M. Kirk
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Calculation of 2017 UUF

9. The total UUF forecast is generated by adding the difference between forecast December 2017 unbilled volumes and forecast December 2016 unbilled volumes to the 2017 UAF forecast. As such, the 2017 Test Year UUF forecast is as follows:

$$\begin{aligned} 2017 \text{ UUF} &= (\text{Forecast of UAF Gas}) + (\text{Change in Unbilled Gas}) \\ &= (\text{Forecast of UAF Gas}) + (\text{Forecast of December 2017 Unbilled Gas} \\ &\quad - \text{Forecast for December 2016 Unbilled Gas}) \\ &= 98,279 \text{ } 10^3 \text{ m}^3 + (744,548 \text{ } 10^3 \text{ m}^3 - 736,570 \text{ } 10^3 \text{ m}^3) \\ &= 98,279 \text{ } 10^3 \text{ m}^3 + 7,978 \text{ } 10^3 \text{ m}^3 \\ &= 106,257 \text{ } 10^3 \text{ m}^3 \end{aligned}$$

Witnesses: M. Kirk
D. Small