

AVERAGE NUMBER OF CUSTOMERS

1. The purpose of this exhibit is to present the forecast of the annual average number of customers underpinning the 2018 volume budget. The annual average customer methodology has been used by Enbridge to calculate forecast customer numbers for more than ten years.
2. The 2018 Customer Budget of 2,183,043 is forecast to be 29,119, or 1.4%, above the 2017 Board Approved Budget of 2,153,924. A detailed breakdown of the number of customers by rate class is provided at Exhibit C3, Tab 2, Schedule 2. The increase in customers is primarily attributable to the customer additions in the 2018 Budget. Total customer additions are forecast at 30,449 for 2018. The customer additions forecast underpins the new customer volumes forecast of 90.3 10⁶m³ in the 2018 Budget relative to the 2017 Budget in the General Service market as shown at Exhibit C3, Tab 2, Schedule 3 (page 3, column 6).

Underlying Forecast Methodology

3. Consistent with previous rate proceedings, each year's customer count is reported as the annual average of monthly customer numbers. Every month, customer numbers are determined by the number of active meters (or unlock meters)¹. As a result, each month's customer number is an aggregate sum of the total active meters for that particular month. Specifically, each year's annual average is calculated as follows:

¹ An unlock meter is counted as a customer whose gas meter is unlocked, allowing gas to flow through the meter to a premise.

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Annual Average_Customers = (1/12)(January_active_meters + February_active_meters + March_active_meters + April_active_meters + May_active_meters + June_active_meters + July_active_meters + August_active_meters + September_active_meters + October_active_meters + November_active_meters + December_active_meters)*

4. Consistent with the contract demand forecast methodology discussed in the Gas Volume Budget evidence, contract customer counts in the contract market are generated through the grassroots forecasting approach between account executives and customers (including the probability-weighted methodology for potential new customers). The approach for forecasting the total number of contract market customers is represented below:

*forecast contract market customers = year end customers
+ forecast new customer additions
+ forecast replacement customer additions
- forecast lost customers
+ forecast transfer gains (i.e., customer migration from general service Rate 6 to contract market rate class)
– forecast transfer losses (i.e., customer migration from contract market rate class to general service Rate 6)*

5. In the most simplistic sense, general service customers are forecast as follows:

General Service customers = year-end customers
+ forecast new customers
– forecast locked customers
+/- forecast gains or losses.

However, due to lags inherent in moving a customer addition to an unlocked customer, as well as variability in the timing of locked customers, lags impact the final number of unlocked customers. Regression analysis is used to enhance the objectivity of the forecast by leveraging model results using actual monthly data to predict the lags and the pattern of locked meters. Transfer gains or losses between contract rate class and general service Rate 6 continue to be obtained from account executives, and are layered onto the forecast general service Rate 6 customers.

6. There is always a time lag between when the service line is installed (that underpins capital expenditures and customer additions) and the first flow of gas which occurs when the customer moves into the premise and calls to have their meter unlocked by field staff. Only then does gas service commence and the customer's account (that underpins billed revenues and volumes) is activated. This time lag is challenging to predict. The Company has developed objective models to enhance the forecast process by estimating historical lags and considering these results as part of its forecast of unlocks.
7. Lock meters are defined as customers whose gas meters are locked and no gas is flowing through the meter to a premise. This can result from vacant premises (e.g., new construction, move-in/move out, bankruptcies, etc.), customers switching off gas to an alternate energy source, payment or credit reasons and seasonal usage. Unfavorable economic conditions (e.g., vacancy or bankruptcy) may lead to an increase in locked meters and this factor has been incorporated into the models considered as part of the customer forecast.
8. The 2018 Customer forecast was informed by the cumulation of the latest actual number of customers from 2016, expectations of year-end 2017 customer

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additions, 2018 forecast of housing starts, and the ensuing 2018 forecast of customer additions. As shown at Table 2, the 2016 Total Actual Customer count was 5,754 lower than the 2016 Board-Approved Budget of 2,130,437. The

decrease is primarily due to lower customer additions in 2016 as shown at Table 1 below. These contributing factors were taken into account in the development of the 2017 Customer Budget.

Table 1 - Comparison of Customer Additions

<u>2016 Customer Additions</u>		
<u>Actual</u>	<u>Board-Approved Budget</u>	<u>Variance</u>
29,991	35,592	(5,601)

9. Monthly forecasts of customer unlocks were informed by historical monthly profiles as well as the lagged results from when customer additions become unlocks and when seasonal customers interrupt and subsequently resume service. The monthly forecast of customers is shown at Exhibit C1, Tab 2, Schedule 1, Appendix A, in Tables 5 and 6.

Evaluation of Forecast Accuracy – Historical Actual vs. Board Approved Budget

10. Historical Board Approved customer numbers are set out in Table 2. The information for periods prior to 2006 reflects a fiscal year-end of September 30th, whereas the years starting from 2006 are calendar years.
11. Table 2 on the following page shows Historical Actual vs. Board Approved customer numbers. The average percentage variance between actual customer

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numbers and forecast customer numbers over the period shown is approximately 0.05%.

Table 2 - General Service and Contract Market Customers

	Col. 1	Col. 2	Col. 3	Col. 4	
Test Year	<u>Actual Customers</u>	<u>Board-Approved Customers</u>	<u>Variance Customers</u> (1-2)	<u>%Variance Customers</u> (3/2)*100	
FISCAL YEAR	1996	1,263,290	1,262,815	475	0.0%
	1997	1,312,434	1,309,752	2,682	0.2%
	1998	1,364,350	1,353,178	11,172	0.8%
	1999	1,414,788	1,417,832	(3,044)	-0.2%
	2000 ^a	1,464,738	1,468,915	(4,177)	-0.3%
	2001	1,519,039	1,514,710	4,329	0.3%
	2002	1,566,710	1,565,017	1,693	0.1%
	2003	1,622,016	1,615,037	6,979	0.4%
	2004*	1,676,380	1,672,586	3,794	0.2%
	2005 ^b	1,724,716	1,718,766	5,950	0.3%
CALENDAR YEAR	2006	1,782,813	1,792,615	(9,802)	-0.5%
	2007	1,824,789	1,823,258	1,531	0.1%
	2008	1,865,020	1,864,047	973	0.1%
	2009	1,887,605	1,906,437	(18,832)	-1.0%
	2010	1,926,294	1,931,528	(5,234)	-0.3%
	2011	1,960,378	1,965,538	(5,160)	-0.3%
	2012	1,994,903	1,984,734	10,169	0.5%
	2013	2,030,001	2,025,462	4,539	0.2%
	2014	2,063,837	2,059,619	4,218	0.2%
	2015	2,094,681	2,098,952	(4,271)	-0.2%
2016	2,124,683	2,130,437	(5,754)	-0.3%	

* 2004 Bridge Year Estimate from RP-2003-0203 was reported at column 2 because Board Approved numbers are not available since there was no 2004 Board Approved Volumes Budget due to the nature of the 2004 Rate Application. Please see RP-2003-0048, Exhibit A, Tab 3, Schedule 1 for the rationale for implementing this new approach.

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