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November 14, 2022

Sent by EMAIL, RESS e-filing

Ms. Nancy Marconi
Registrar
Ontario Energy Board
27-2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Marconi:

Re: EPCOR Natural Gas Limited Partnership's ("EPCOR") - Customer Volume Variance Account - Additional Evidence - EB-2022-0184 – Phase 2

Pursuant to Procedural Order 3, please find enclosed additional evidence regarding the Customer Volume Variance Account ("CVVA"). This evidence contains information which:

1. Explains the elements of the mathematical formula that EPCOR proposes to use in calculating amounts recoverable under the proposed CVVA, including a step-by-step explanation and example on how this formula will be applied to the Rate 1 and 6 customers and corresponding customer segments;
2. Clarifies EPCOR's intent to maintain both an Energy Content Variance Account (EVCA) and CVVA, including an explanation of the differences between the existing ECVA and the proposed CVVA;
3. Provides financial impacts to the utility should the board not approve the CVVA as proposed

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "T. Hesselink", written over a light blue horizontal line.

Tim Hesselink CPA, CGA
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EPCOR Natural Gas Limited Partnership
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Encl.

EPCOR Natural Gas Limited Partnership
EB-2022-0184 – Phase 2 - Customer Volume Variance Account
Additional Evidence

Items 1& 2:

1. Explains the elements of the mathematical formula that EPCOR proposes to use in calculating amounts recoverable under the proposed CVVA, including a step-by-step explanation on how this formula will be applied to the Rate 1 and 6 customers and corresponding customer segments; and
2. Clarifies EPCOR's intent to maintain both an Energy Content Variance Account (EVCA) and CVVA, including an explanation of the differences between the existing ECVA and the proposed CVVA

Refer to:

There are two attachments to address items 1 & 2 above. The first is Appendix A – which provides an step by step explanation on how the formula for the CVVA will be calculated. The second is the accompanying excel, which details how the proposed calculations are made and the balances determined (ENGLP_AddlEvidence_CVVA_excel_20221114).

Item 3:

3. Provides financial impacts to the utility should the board not approve the CVVA as proposed

Commentary:

Using the above described calculation methodology, EPCOR is predicting a revenue shortfall of \$7.81M over the 10 year rate term. This is equivalent to a 13.3% reduction of the approved revenue requirement of \$58.53M as presented in EPCOR's EB-2018-0264 application. The shortfall would also reduce the total expected net income from \$6.1M to a loss of \$1.8M over the 10 year term, resulting in a negative cumulative return on equity.

Table 1- Updated CVVA Balance Calculation

		2021	2022	2023	2024	2025	2026	2027	2028	SUM
		ACTUAL	ESTIMATE	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	FORECAST	
R1 RES	NAC REV	\$712,763	\$1,825,242	\$2,974,088	\$4,049,533	\$4,499,521	\$4,599,249	\$4,711,068	\$4,815,570	\$7,777,681
	CIP REV	\$842,161	\$2,316,478	\$3,776,448	\$5,170,089	\$5,764,585	\$5,891,912	\$6,034,169	\$6,168,874	
	DIFFERENCE	\$129,398	\$491,236	\$802,360	\$1,120,557	\$1,265,064	\$1,292,663	\$1,323,100	\$1,353,303	
R1 COM	NAC REV	\$17,502	\$72,525	\$126,163	\$163,330	\$185,564	\$189,879	\$194,282	\$198,544	\$110,975
	CIP REV	\$23,095	\$78,830	\$137,315	\$178,524	\$203,130	\$207,851	\$212,668	\$217,351	
	DIFFERENCE	\$5,593	\$6,305	\$11,151	\$15,194	\$17,566	\$17,972	\$18,385	\$18,807	
R1 Ag	NAC REV		\$4,922	\$10,344	\$12,923	\$13,107	\$13,295	\$13,485	\$13,678	(\$26,865)
	CIP REV		\$2,608	\$7,135	\$8,774	\$8,900	\$9,027	\$9,157	\$9,289	
	DIFFERENCE		(\$2,314)	(\$3,209)	(\$4,149)	(\$4,208)	(\$4,268)	(\$4,328)	(\$4,390)	
R6 M COMM	NAC REV	\$19,757	\$219,627	\$480,962	\$648,022	\$673,679	\$676,311	\$682,802	\$708,961	\$903,437
	CIP REV	\$42,325	\$265,647	\$587,802	\$787,702	\$818,271	\$821,364	\$829,646	\$860,799	
	DIFFERENCE	\$22,568	\$46,021	\$106,840	\$139,681	\$144,592	\$145,054	\$146,843	\$151,838	
R6 L COMM	NAC REV	\$174,178	\$816,682	\$1,210,104	\$1,629,169	\$1,571,486	\$1,576,776	\$1,582,146	\$1,602,351	(\$954,835)
	CIP REV	\$90,158	\$402,603	\$1,128,136	\$1,504,401	\$1,509,424	\$1,514,522	\$1,519,696	\$1,539,116	
	DIFFERENCE	(\$84,020)	(\$414,079)	(\$81,968)	(\$124,768)	(\$62,062)	(\$62,255)	(\$62,450)	(\$63,234)	
TOTAL	NAC REV	\$924,201	\$2,938,997	\$4,801,660	\$6,502,976	\$6,943,356	\$7,055,510	\$7,183,783	\$7,339,104	\$7,810,392
	CIP REV	\$997,740	\$3,066,166	\$5,636,835	\$7,649,490	\$8,304,309	\$8,444,676	\$8,605,335	\$8,795,428	
	DIFFERENCE	\$73,539	\$127,169	\$835,175	\$1,146,514	\$1,360,953	\$1,389,166	\$1,421,552	\$1,456,325	

Appendix A – CVVA Process Document

Customer Volume Variance Account (“CVVA”) calculation process

1. Calculate average volume per customer type on a monthly basis
 - i. Totals to be calculated on an annual basis (calendar year) to match the annual Common Infrastructure Plan (“CIP”) volumes used as a common assumption.
 - ii. Use monthly i.e. calendarized consumption volumes. These are determined based on billing period start and end dates with billed volumes allocated to each calendar month over which a billing period spans based on number of days in that month.
 - iii. Actual consumption is then divided by actual billed customer count for that month. The data is categorized based on customer categories in the CIP that used a common consumption assumption:
 - Rate 1 Residential
 - Rate 1 Commercial
 - Rate 1 Agricultural
 - Rate 6 Medium Commercial
 - Rate 6 Large Commercial

Note: Commercial customers with a volume greater than 10,000m³/year are billed as a Rate 6 customer, consistent with the approved rate order. This threshold will be used as the small commercial vs. medium commercial classification to avoid rate class overlap in the CVVA calculation.

2. Adjust average actual monthly volume using the CIP heat value of 38.89 in order to remove impact of the Energy Content Variance Account (“ECVA”)

$$1 + \left(\frac{\text{Actual Energy Content} - 38.89 \text{ MJ/m}^3}{\text{Actual Energy Content}} \right)$$

Note: clarification of the segregation of the CVVA & ECVA is provided further in this document

3. The Normalized Annual Consumption (“NAC”) volume is the calculated by customer and rate class. The weather normalization process used in the CVVA calculation (described in Steps 3 and 4) is largely consistent with the weather normalization process for ENGLP Aylmer as approved by the OEB for the latest Cost of Service application (EB-2018-0336) and used in ENGLP Aylmer’s annual Gas Supply Plans and Gas Supply Plan Updates.

First, take the most recent average annual consumption for each rate class and category of customers, then remove the baseload consumption from these values.

- i. For Rate 1 Residential and Rate 1 Commercial, Average of July and August consumption volume (when there is minimal heating demand). For all other months, apply a trend to the baseload consumption from the previous year’s baseload consumption.

- ii. For Rate 1 Agricultural, Rate 6 Medium Commercial, and Rate 6 Large Commercial, for each year, the lowest average monthly consumption that calendar year.
4. A regression analysis is run on natural log of actual heating degree day (HDD) for the month vs the natural log of average heat-value-adjusted consumption to obtain the following parameters from the regression analysis:
- i. the coefficient (m) and
 - ii. the intercept (b)

The coefficient represents the additional amount of gas consumption per each increase in heating degree day.

Note: As is standard practice in the industry, monthly averages considered to be outliers are removed from the analysis (large spikes or troughs in consumption from the other monthly averages). Outlier removal is required for the weather normalization process to determine a reasonable and accurate relationship between actual average consumption and observed weather for each customer group

For each rate class / customer type:

- i. Multiply the coefficient (m) obtained by the natural log of 20-year (1990 to 2020) historical normal HDD (HDD_{norm}), add the intercept (b), and take the exponential of the result
- ii. For each month, add back the baseload consumption to obtain the Normalized Actual Consumption ($NAC_{monthly}$) for the month

$$NAC_{monthly} = \exp(m \times \ln(HDD_{norm}) + b) + \text{Baseload Consumption}$$

Note: No significant impact was observed in using the 20-year normal vs the 10-year normal on the CVVA balance for the Southern Bruce area.

5. Calculate the NAC revenue per customer type each month:
- i. Using the monthly NAC volumes for each customer class, calculate the volumes in each tier based on the tiered tariff structure
 - ii. Calculate the per-customer monthly NAC revenue, using the monthly NAC volume, including monthly charge, and the delay in revenue rider
 - iii. Calculate the weather normalized revenue each month by multiplying the per-customer monthly NAC revenue by the number of billed customers for that month

6. Calculate the total CIP revenue per customer type each month by:
 - i. Using the monthly CIP volume for each customer class, calculate the tier volumes based on the rate structure
 - ii. Calculate the per-customer monthly CIP revenue, using the monthly CIP volume, including monthly charge, and the delay in revenue rider
 - iii. multiplying the per-customer monthly CIP revenue volume by the number of billed customers for that month
7. Subtract the total monthly NAC revenue from the total monthly CIP revenue and record the difference in the CVVA

ECVA Calculation Process – Segregation from CVVA

To ensure the CVVA does not double count the impact of heat value difference in the actual consumption, actual average consumption is adjusted by the ratio of actual vs CIP heat value when comparing to the CIP values. This ensures that the comparison in the CVVA calculation process is done as if the customers consumed the volume of gas at the CIP heat value.

For example, if the actual heat value is higher than the CIP heat value, the customer would have consumed less gas than if Enbridge delivered gas with the CIP heat value (since the actual gas consumed has higher energy content per volume and the customer would need to consume less volume to generate the same amount of heat). The same adjustment is made for weather – the average actual consumption is normalized to the 20-year average heating degree day for the area before comparing to the CIP averages.

The CVVA captures only the impact on revenue due to the difference in actual customers consumption compared to the customer consumption assumed in the CIP.

The ECVA captures only the impact on revenue due to the actual heat value of the gas delivered, compared to the heat value assumed in the CIP.

Year- End Account Balance and Accrual Determination

Due to the timing of year-end close and delays in data availability (amounts consumed in November/December would not be fully billed until the following calendar year), EPCOR intends to book an accrual in the CVVA using the available regression results based on actual data and apply to the weather normal HDD, providing a weather normalized average consumption that can be used to reasonable estimate year end results.