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TR 2, p.40

To provide example that shows mechanics of the PGVA and GHG DVA with respect to forecast vs actual costs of gas and carbon

RESPONSE

Enbridge anticipates that it will enter into ten-year fixed price contracts for RNG. Ratepayers will pay the same amount for RNG as they would for conventional natural gas (inclusive of carbon allowance costs) on a forecast basis. The balance of the RNG cost will be covered by government funding.

At the time of RNG procurement, a ten-year forecast of the costs for carbon allowances and natural gas will be used to determine the volume of RNG that can be procured, taking into account the amount of available government funding.

Enbridge will recover the gas costs portion of the RNG costs by including the annual forecast cost in the calculation of the PGVA Reference Price. Therefore, there will not be any price variances going into the PGVA associated with the RNG contract as the reference price will reflect the gas costs portion of the RNG contract amount being paid to the producer.

Enbridge will recover the carbon allowance cost portion of the RNG costs by including the annual forecast volume amount in the volume and GHG emissions forecast included in the Cap and Trade Compliance Plan. The costs will be recovered through Cap and Trade Unit Rates. Any variances between amounts recovered and actual costs will be recorded in the GHG-Customer and Facility Variance Accounts for later clearance in the same manner as other Cap and Trade cost variances.

The following example (from Table 2 filed at Exhibit C, Tab 5, Schedule 2, page 10) sets out the mechanics of how Enbridge will recover RNG costs.

Table 1 : Renewable Natural Gas Procurement Funding Model

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 9	Year 9	Year 10
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
(a) Forecast Cost of Traditional Gas Supplies (\$/GJ) ¹	\$ 3.69	\$ 3.45	\$ 3.42	\$ 3.43	\$ 3.46	\$ 3.59	\$ 3.65	\$ 3.73	\$ 3.82	\$ 3.86
(b) Forecast Cost of Carbon: Mid-Range LTCPF (\$/GJ) ²	\$ 0.85	\$ 0.90	\$ 0.90	\$ 0.95	\$ 1.00	\$ 1.05	\$ 1.56	\$ 1.81	\$ 2.16	\$ 2.51
(c) Required Provincial Subsidy (\$/GJ) ³ (c) = (d) - (a) - (b)	\$ 11.46	\$ 11.65	\$ 11.68	\$ 11.61	\$ 11.53	\$ 11.35	\$ 10.79	\$ 10.46	\$ 10.02	\$ 9.63
(d) Assumed Cost of RNG (\$ / GJ)	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.00

Notes:

- 1) Long term natural gas price forecast; Enbridge CDA.
- 2) Assumed Cost of Carbon = OEB Mid-Range LTCPF.
- 3) Required Provincial subsidy must be secured by contract based on life of RNG procurement contracts.

The amounts in row (a) of the Table will be included in Enbridge’s PGVA reference price and recovered through Enbridge’s gas costs. The amounts in row (b) will be used in establishing Enbridge’s Weighted Average Cost of Compliance (“WACC”). The amounts in row (c) will be recovered by Enbridge from funding provided by the Ontario government.

Gas Costs/PGVA Mechanics

Table 1 above shows a gas cost of \$3.69/GJ for Year 1. This price will be used in the derivation of the PGVA reference price for the four quarters of Year 1. Table 2 below is an illustrative calculation of the PGVA reference price. The inclusion of this RNG price is provided in Table 2, below. Refer to Row 9.

Columns 5 and 6 have been included in Table 2 to show the effect of the actual price at the end of the quarter. Column 6, Row 9 shows that the actual price of the RNG purchases will equal the price used in the derivation of the PGVA reference price (Column 4, Row 9). That is because the forecast of gas costs for RNG will be fixed as of the time that of the RNG procurement. Therefore, the variance as shown in Column 6 will be 0 for the RNG portion.

Table 2: PGVA reference price calculation

PGVA Reference Price Calculation						Actual Price	
		Col 1. 103 m3	Col 2. \$(000)	Col 3.	Col 4.	Col 5.	Col 6.
				\$/103	\$/GJ	\$/GJ	\$/GJ
				Col2/Col1	(Col.3 / 38.42)		
1.1	Alberta Production	0.00	0.00	0	0	-	-
1.2	Western - @ Empress - TCPL	1,359,426.20	131,694.90	96.875	2.521	2.45	(0.07)
1.3	Western - @ Nova - TCPL	475,013.00	34,577.40	72.793	1.895	1.92	0.02
1.4	Western Buy/Sell with Fuel	380.00	38.40	100.98	2.628	2.60	(0.03)
1.5	Western - @ Alliance	0.00	0.00	0	0	-	-
1.6	Less TCPL Fuel Requirement	-69,861.80	0.00			-	-
1	Total Western Canadian Supplies	1,764,957.50	166,310.70	94.229	2.453	2.45	(0.00)
2	Peaking Supplies	3,520.50	2,381.40	676.435	17.606	17.6	-
3	Ontario Production	358.00	50.20	140.225	3.65	3.66	0.01
4	Chicago Supplies	651,515.00	87,826.00	134.803	3.509	3.58	0.07
5	Delivered Supplies	2,613,645.40	374,588.70	143.32	3.73	3.65	(0.08)
6	Niagara Supplies	1,900,052.10	251,421.80	132.324	3.444	3.44	(0.00)
7	Link Supplies	0.00	0.00	0	0	-	-
8	Dominion Supplies	1,102,563.70	124,673.80	113.076	2.943	2.78	(0.16)
9	RNG Supplies	11,811.60	1,638.23	138.696	3.69	3.69	-
10	Total Supply Costs Total	8,048,423.70	1,007,252.60	125.333	3.26	3.22	(0.04)
11	Transportation	354,520.40					
12	Total Purchases & Receipt	8,036,612.10	1,361,773.00	169.446	4.41	4.37	(0.04)

Based on this example, the PGVA reference price is \$4.41/GJ. The actual price of the gas purchases is \$4.37/GJ, resulting in a variance of \$0.04/GJ which would be a credit in the PGVA and \$0.00/GJ of this variance is attributable to the RNG purchases.

The Accounting Order for the PGVA will need to be updated to reflect the inclusion of RNG supply at a predetermined/fixed level.

Carbon Costs/GHG-Customer and Facility VA Mechanics

Enbridge will determine the costs of carbon allowances for each year of the RNG contract by using the most recent version of the OEB's Long Term Carbon Price Forecast ("LTCPF") available at the time of contracting. These costs will be set for the duration of the RNG contract. This notional cost of carbon allowances for the RNG

volumes will be reflected in the calculation of the WACC, which will be used to determine the variance between actual costs and the amount collected in rates. Differences between the proxy price used to set the customer and facilities related Cap and Trade Unit Rates (“Unit Rates”) and the WACC will be calculated and provided to the Board in the annual report on Cap and Trade activities, which will be submitted on August 1 of each year for the previous year. Table 3 below is an illustrative example of how the notional cost of carbon allowances for RNG volumes will be considered in calculating the WACC.

Table 3: Example WACC Calculation for 2018

Compliance Option	Volume (tonnes)	Price (\$CAD/tCO _{2e})	Weighted Cost (\$CAD)
Allowances	18,263,505	\$20.00	\$365,270,097
Offsets	1,588,426	\$18.00	\$28,591,670
RNG	3,396	\$17.00	\$57,732
TOTAL	19,855,327	-	\$393,919,500

Notes:

1. The GHG volumes included in this example are illustrative only – they do not represent actuals, as there are no customer and facilities final volumes yet for 2018.
2. Illustrative prices and volumes for allowances and offsets have been used for example only, and are not indicative of the Company’s actual 2018 compliance strategy.
3. Volume of RNG emissions is based on volume shown on line 9 in Table 2 for consistency.
4. The notional carbon value for RNG volumes corresponds to the 2018 amount in the LTCPF (\$17/tCO_{2e}). If this was a 2019 example, the notional carbon value used would correspond to the 2019 amount in the LTCPF, and so on.

The WACC in this illustrative example is \$19.84/tCO_{2e}. Assuming the Unit Rates were set using the proxy price of \$18.99/tCO_{2e} (as provided in Exhibit B, Tab 4, Schedule 1), the difference between the Unit Rates and the WACC is \$0.85/tCO_{2e}, which would equate to \$0.002/m³. This total variance between the WACC and the Unit Rate, of which the notional cost of carbon for the RNG is a small piece, would be recorded in the GHG-Customer and Facility Variance Accounts and sought for recovery from customers.

The Accounting Orders for the GHG-Customer and Facility Variance Accounts will need to be updated to stipulate that Enbridge’s compliance costs include the notional costs of carbon allowance purchases of carbon allowances associated with the RNG volumes at the LTCPF that existed at the time of RNG procurement.