

COST OF CAPITAL SUMMARY

1. The evidence, in the following tables 1 through 3, shows a summary of Enbridge's cost of capital for each of the 2016 Board Approved (EB-2015-0114), the 2017 placeholder (EB-2012-0459), and the 2017 Updated Forecast.

TABLE 1
COST OF CAPITAL SUMMARY

Line No.	EB-2015-0114 - 2016 Approved (excluding CIS)				Return (\$Millions)
	Principal (\$Millions)	Component %	Cost Rate %	Return %	
1. Long-term debt	3,546.1	61.41%	4.96%	3.046%	175.9
2. Short-term debt	49.6	0.86%	1.57%	0.013%	0.8
3. Preferred shares	100.0	1.73%	2.16%	0.037%	2.2
4. Common Equity	2,078.8	36.00%	9.19%	3.308%	191.0
5. Total	5,774.5	100.00%		6.404%	369.8

TABLE 2
COST OF CAPITAL SUMMARY

Line No.	EB-2012-0459 - 2017 Placeholder (excluding CIS)				Return (\$Millions)
	Principal (\$Millions)	Component %	Cost Rate %	Return %	
1. Long-term debt	3,591.4	60.57%	5.32%	3.222%	191.1
2. Short-term debt	103.1	1.74%	4.30%	0.075%	4.4
3. Preferred shares	100.0	1.69%	4.64%	0.078%	4.6
4. Common Equity	2,134.4	36.00%	10.17%	3.661%	217.1
5. Total	5,928.9	100.00%		7.036%	417.3

Witness: R. Small

TABLE 3
COST OF CAPITAL SUMMARY

Line No.	2017 Updated Forecast (excluding CIS)				Return (\$Millions)
	Principal (\$Millions)	Component %	Cost Rate %	Return %	
1. Long-term debt	3,739.6	62.28%	4.83%	3.008%	180.6
2. Short-term debt	3.2	0.05%	1.23%	0.001%	0.0
3. Preferred shares	100.0	1.67%	2.24%	0.037%	2.2
4. Common Equity	2,161.6	36.00%	8.77%	3.157%	189.6
5. Total	6,004.4	100.00%		6.203%	372.5

- As reflected in Table 3 versus Table 2 above, the 2017 Updated Forecast capital structure has been updated in accordance with the Board's EB-2012-0459 Decision and Rate Order requiring the return on equity to be re-set each year using the Board approved parameters, and that the cost of debt be updated annually using the most current information, including information on actual amounts and rates associated with debt issued in the prior year.
- Details of the 2017 Updated Forecast financing costs, including forecast debt issuances and cost rates, are included in Exhibit E1, Tab 3, Schedule 1. Evidence with respect to the updated 2017 return on equity included within the 2017 updated allowed revenue and revenue deficiency calculation is found in evidence at Exhibit E1, Tab 2, Schedule 1.
- Further details of each of the elements of the 2017 updated forecast capital structure, and the determination of the overall cost of capital and resulting deficiency in earnings are found at Exhibits E2, Tab 1, Schedules 1 through 5.

Witness: R. Small

RETURN ON EQUITY CALCULATION FOR 2017

1. The purpose of this evidence is to provide the Return On Equity ("ROE") to be used as part of the cost of capital determination for the proposed 2017 revenue requirement, as well as for the calculation of Earnings Sharing, if any, for 2017. The Company has calculated the ROE using the methodology provided in the Report of the Board on the Cost of Capital for Ontario's Regulated Utilities (Cost of Capital Report) issued December 2009. The following illustrates how the ROE is calculated in accordance with the Cost of Capital Report:

$$ROE_t = 9.75\% + [0.5 \times (LCBF_t - 4.25\%)] + [0.5 \times (UBS_t - 1.415\%)]$$

Where:

- ROE is set in the month that is three months in advance of the effective date for rate implementation.
 - LCBF is the Long Canada Bond Forecast determined as the average 3-month out and 1-year out yields of the 10-year Government of Canada (GoC) Bond Yield Forecasts (as sourced from Consensus Economics) plus the actual spread of the 30-year over the 10-year GoC (as published by the Bank of Canada) in the month of analysis.
 - UBS is the A-rated Utility Bond Yield Spread between the Canada 30-year Utility bond index yield (as reported by Bloomberg L.P.) and the 30-year GoC (as published by the Bank of Canada) in the month of analysis.
 - 9.75% is the Base ROE,
 - 4.25% is the Base LCFB, and
 - 1.415% is the Base UBS.
2. In its EB-2012-0459 Decision issued July 17, 2014, the Board determined that "the Cost of Capital will be re-set each year using the Board's established approach" (p.10). The Board further concluded that "the allowed ROE for purposes of calculating the ESM should be the ROE used to determine the allowed revenue requirement" (p.14). "[T]he preferred approach is to update the return on equity each year during the annual rate adjustment proceeding using the Board-approved

Witness: M. Suarez

parameters. The Board publishes these figures in November which should provide Enbridge with adequate time to incorporate them into the final rates” (p.55).

3. The Board issued its Cost of Capital Parameter Updates for 2017 Applications (the “Update”) on October 27, 2016 where the ROE effective January 1, 2017 is determined to be 8.78%.
4. The following is the derivation of the ROE of 8.78% for 2017 in accordance with the Update. The LCBF of 2.037% is derived at Step 3 of the Update and the UBS of 1.680% is determined at Step 1 so that:

$$\begin{aligned}\text{ROE}_{2017} &= 9.75\% + [0.5 \times (\text{LCBF}_{2017} - 4.25\%)] + [0.5 \times (\text{UBS}_{2017} - 1.415\%)] \\ \text{ROE}_{2017} &= 9.75\% + [0.5 \times (2.037\% - 4.25\%)] + [0.5 \times (1.680\% - 1.415\%)] \\ \text{ROE}_{2017} &= 8.78\%\end{aligned}$$

2017 COST OF DEBT

1. As set out in the EB-2012-0459 Decision and Rate Order (pages 2 and 3), Enbridge's cost of debt is to be updated each year from 2015 to 2018 using the most current information available, including information about the actual amounts and rates associated with any debt issued in the prior year.
2. Enbridge's forecast cost of debt for 2017 is set out within Table 1, and explained below.

TABLE 1
COST OF DEBT SUMMARY

Line No.	2017 Updated Forecast (excluding CIS)				Return (\$Millions)
	Principal (\$Millions)	Component %	Cost Rate %	Return %	
1. Long-term debt	3,739.6	62.28%	4.83%	3.008%	180.6
2. Short-term debt	3.2	0.05%	1.23%	0.001%	0.0
3. Preferred shares	100.0	1.67%	2.24%	0.037%	2.2
4. Total	3,842.8	64.00%		3.046%	182.9

3. As required by the Board's EB-2012-0459 Decision and Rate Order, Enbridge has updated its cost of debt by taking account of its forecast 2017 rate base for ratemaking purposes, its actual level and cost of debt, which has been updated to include actual debt issuances through 2016, and to also include the impact of updated forecast 2017 debt issuances.
4. Enbridge's actual 2016 long term debt issuance increased modestly to \$300 million, as compared to the \$250 million forecast within EB-2015-0114. Issuance timing was deferred from March to August as better than anticipated liquidity enabled

Witnesses: R. Craddock
R. Small

Enbridge to delay issuing until pricing was optimized. The debt was issued at an effective cost rate of 3.42% including the impact of hedge settlements, as compared to 4.47% forecast within EB-2015-0114. The lower rate was as a result of lower corporate spreads and underlying Government of Canada rates.

5. For 2017, Enbridge plans to issue \$300 million of debt, the details of which can be found in Table 2 below. The issuances will fund a maturing 10 year medium-term note in the amount of \$200 million, as well as growth in rate base.

Table 2

Item No.	Amount (\$MM)	Issue Date	Term (Yrs)	Canada Yield	Corporate Spread	Coupon	Amortized Issue Costs	Effective Cost
1	150	August 2017	10	1.80%	1.40%	3.20%	0.05%	3.25%
2	150	August 2017	30	2.30%	1.70%	4.00%	0.02%	4.02%

6. Details of all elements of Enbridge's term debt forecast for the 2017 Updated Forecast, are set out within Exhibit E2, Tab 1, Schedule 2.
7. The calculation of the average cost rate for Enbridge's term debt, which equates to 4.83%, is set out at Exhibit E2, Tab 1, Schedule 1, page 2.
8. There are no preferred share issuances planned for 2017. Enbridge continues to have \$100 million of preference shares, with a 2017 cost rate of 2.24%.
9. As explained in Exhibit B1, Tab 1, Schedule 1, Enbridge's rate base for ratemaking purposes for 2017, exclusive of CIS (which has a different cost of capital, in accordance with the EB-2011-0226 Settlement Agreement) is \$6,004.4 million. Under Enbridge's capital structure, which includes a 64% weighting of debt and preferred shares, this means that Enbridge's level of debt for ratemaking purposes in 2017 is \$3,842.8 million.

Witnesses: R. Craddock
R. Small

10. In total, Enbridge's cost of debt (exclusive of CIS / CC) to be included in 2017
Allowed Revenue is \$182.9 million.

Witnesses: R. Craddock
R. Small

COST OF CAPITAL
2017 UPDATED FORECAST

	Col. 1	Col. 2	Col. 3	Col. 4
Line No.	Principal Excl. CC/CIS (\$Millions)	Component %	Cost Rate %	Return Component %
1. Long and Medium-Term Debt	3,739.6	62.28	4.83	3.008
2. Short-Term Debt	3.2	0.05	1.23	0.001
3.	3,742.8	62.33		3.009
4. Preference Shares	100.0	1.67	2.24	0.037
5. Common Equity	2,161.6	36.00	8.77	3.157
6.	6,004.4	100.00		6.203
7. Rate Base	(\$Millions)			6,004.4
8. Utility Income	(\$Millions)			351.1
9. Indicated Rate of Return				5.847
10. Deficiency in Rate of Return				(0.356)
11. Net Deficiency	(\$Millions)			(21.4)
12. Gross Deficiency	(\$Millions)	(excl. CC/CIS)		(29.1)
13. Customer Care/CIS Deficiency	(\$Millions)	(\$126.6 vs \$122.4)		(4.2)
14. Total Gross Revenue Deficiency	(\$Millions)			(33.3)
15. Revenue at Existing Rates	(\$Millions)			2,725.3
16. Allowed Revenue	(\$Millions)			2,758.6
17. Gross Revenue Deficiency	(\$Millions)			(33.3)

Witness: R. Small

CALCULATION OF COST RATES
FOR CAPITAL STRUCTURE COMPONENTS
2017 UPDATED FORECAST

Line No.	Col. 1 Average of Monthly Averages (\$Millions)	Col. 2 Col. 3 Carrying Cost (\$Millions)
<u>Long and Medium-Term Debt</u>		
1. Debt Summary	3,771.7	182.2
2. Unamortized Finance Costs	(32.1)	-
3. (Profit)/Loss on Redemption	-	-
4.	<u>3,739.6</u>	<u>182.2</u>
5. Calculated Cost Rate		<u>4.83%</u>
<u>Short-Term Debt</u>		
6. Calculated Cost Rate		<u>1.23%</u>
<u>Preference Shares</u>		
7. Preference Share Summary	100.0	2.2
8. Unamortized Finance Costs	-	-
9. (Profit)/Loss on Redemption	-	-
10.	<u>100.0</u>	<u>2.2</u>
11. Calculated Cost Rate		<u>2.24%</u>
<u>Common Equity</u>		
12. Board Formula ROE		<u>8.77%</u>

Witness: R. Small

SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST OF
TERM DEBT
2017 UPDATED FORECAST

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal (\$Millions)	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost (\$Millions)
Medium Term Notes					
1.	8.85%	October 2, 2025	20.0	8.970%	1.8
2.	7.60%	October 29, 2026	100.0	8.086%	8.1
3.	6.65%	November 3, 2027	100.0	6.711%	6.7
4.	6.10%	May 19, 2028	100.0	6.161%	6.2
5.	6.05%	July 5, 2023	100.0	6.383%	6.4
6.	6.90%	November 15, 2032	150.0	6.950%	10.4
7.	6.16%	December 16, 2033	150.0	6.180%	9.3
8.	5.21%	February 25, 2036	300.0	5.183%	15.5
9.	4.77%	December 17, 2021	175.0	5.310%	9.3
10.	5.16%	December 4, 2017	191.7	5.220%	10.0
11.	4.04%	November 23, 2020	200.0	5.209%	10.4
12.	4.95%	November 22, 2050	200.0	4.990%	10.0
13.	4.95%	November 22, 2050	100.0	4.731%	4.7
14.	4.10%	November 23, 2020	200.0	2.801%	5.6
15.	4.50%	November 23, 2043	200.0	4.198%	8.4
16.	1.85%	April 24, 2017	-	1.970%	- ¹
17.	3.15%	August 22, 2024	215.0	3.241%	7.0
18.	4.00%	August 22, 2044	215.0	3.889%	8.4
19.	4.00%	August 22, 2044	170.0	4.436%	7.5
20.	3.31%	September 11, 2025	400.0	3.619%	14.5
21.	2.50%	August 5, 2026	300.0	3.415%	10.2
22.	3.20%	August 15, 2027	56.3	3.252%	1.8
23.	4.00%	August 15, 2047	56.3	4.021%	2.3
24.			<u>3,699.3</u>		<u>174.5</u>
Long-Term Debentures					
25.	9.85%	December 2, 2024	<u>85.0</u>	9.910%	<u>8.4</u>
26.			<u>85.0</u>		<u>8.4</u>
27.	Removal of separately treated CIS 64% assumed debt of 2017 \$19.7M rate base value		<u>(12.6)</u>	5.350%	<u>(0.7)</u>
28.	Total Term Debt		<u><u>3,771.7</u></u>		<u><u>182.2</u></u>

Notes:

- Enbridge's April 2014 issuance of a \$300 million three-year note has been removed from the calculation of long and medium-term debt costs, and has been re-categorized to short-term debt in a manner consistent with the treatment approved within the Settlement Agreement in Enbridge's 2015 Rate Adjustment proceeding, EB-2014-0276.

Witness: R. Small

UNAMORTIZED DEBT DISCOUNT AND EXPENSE
AVERAGE OF MONTHLY AVERAGES
2017 UPDATED FORECAST

		Col. 1
Line No.		Unamortized Debt Discount and Expense
		(\$Millions)
1.	January 1	33.5
2.	January 31	33.1
3.	February	32.8
4.	March	32.4
5.	April	32.1
6.	May	31.8
7.	June	31.4
8.	July	31.1
9.	August	32.4
10.	September	32.1
11.	October	31.7
12.	November	31.4
13.	December	31.1
14.	Average of Monthly Averages	<u>32.1</u>

Witness: R. Small

PREFERENCE SHARES
 SUMMARY STATEMENT OF PRINCIPAL
 AND CARRYING COST
2017 UPDATED FORECAST

			Col. 1	Col. 2	Col. 3
Line No.	Coupon Rate	Maturity Date	Average of Monthly Averages Principal	Effective Cost Rate	Carrying Cost
			(\$Millions)		(\$Millions)
Fixed/Floating Cumulative Redeemable Convertible \$25 Par Value					
1.	N/A	Group 3 Series D	100.0	2.24%	2.2
2.	Total		100.0		2.2

Witness: R. Small

UNAMORTIZED PREFERENCE SHARE ISSUE EXPENSE
AVERAGE OF MONTHLY AVERAGES
2017 UPDATED FORECAST

		Col. 1
Line No.		Unamortized Issue Expense
		(\$Millions)
1.	January 1	-
2.	January 31	-
3.	February	-
4.	March	-
5.	April	-
6.	May	-
7.	June	-
8.	July	-
9.	August	-
10.	September	-
11.	October	-
12.	November	-
13.	December	-
14.	Average of Monthly Averages	-