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BY E-MAIL AND WEB POSTING

November 23, 2017

To: All Licensed Electricity Distributors and Transmitters
All Gas Distributors
Ontario Power Generation Inc.
All Registered Intervenors in 2018 Cost of Service and Custom Incentive Rate-setting Applications

Re: Cost of Capital Parameter Updates for 2018 Cost of Service and Custom Incentive Rate-setting Applications

The Ontario Energy Board (OEB) has determined the values for the Return on Equity (ROE) and the deemed Long-Term (LT) and Short-Term (ST) debt rates for use in the 2018 cost of service and custom incentive rate-setting (custom IR) applications. The ROE and the LT and ST debt rates are collectively referred to as the cost of capital parameters. The updated cost of capital parameters are calculated based on the formulaic methodologies documented in the [Report of the Board on the Cost of Capital for Ontario's Regulated Utilities](#), issued December 11, 2009.

Cost of Capital Parameters for 2018 Rates

For cost of service and custom IR applications with effective dates in 2018, the OEB has updated the Cost of Capital parameters based on: (i) the September 2017 survey from Canadian banks for the spread over the Bankers' Acceptance rate of 3-month short-term loans for R1-low or A (A-stable) commercial customers, for the ST debt rate; and (ii) data three months prior to January 1, 2018 from the Bank of Canada, *Consensus Forecasts*, and Bloomberg LP, for all other cost of capital parameters.

The OEB has determined that the updated cost of capital parameters for rate applications for rates effective in 2018 are:

Cost of Capital Parameter	Value for Applications for rate changes in 2018
ROE	9.00%
Deemed LT Debt rate	4.16%
Deemed ST Debt rate	2.29%

Detailed calculations of the cost of capital parameters are attached.

The OEB considers the cost of capital parameter values shown in the above table, and the relationships between them, to be reasonable and representative of market conditions at this time.

As documented in the *Report of the Board on Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors* (EB-2010-0379) issued November 21, 2013, the OEB now updates cost of capital parameters for setting rates once per year. For this reason, the cost of capital parameters above will be applicable for all cost of service and custom IR applications (as applicable) with rates effective in the 2018 calendar year.

The OEB monitors macroeconomic conditions and may issue updated parameters if economic conditions materially change. An applicant or intervenors can also file evidence in individual rate hearings in support of different cost of capital parameters due to the specific circumstances, but must provide strong rationale and supporting evidence for deviating from the OEB's policy.

All queries on the cost of capital parameters should be directed to the OEB's Industry Relations hotline, at 416-440-7604 or industryrelations@oeb.ca

Yours truly,

Original Signed By

Kirsten Walli
Board Secretary

Attachment

**Ontario Energy Board
Commission de l'Énergie de l'Ontario**

**Attachment: Cost of Capital Parameter Calculations
(For rate changes effective in 2018)
Return on Equity and Deemed Long-term Debt Rate**

Step 1: Analysis of Business Day Information in the Month

Month:		September 2017				
Day		Bond Yields (%)			Bond Yield Spreads (%)	
		Government of Canada 10-yr	Government of Canada 30-yr	A-rated Utility 30-yr	30-yr Govt over 10-yr Govt	30-yr Util over 30-yr Govt
1	1-Sep-17	1.91	2.30	3.69	0.39	1.39
2	2-Sep-17					
3	3-Sep-17					
4	4-Sep-17					
5	5-Sep-17	1.86	2.27	3.66	0.41	1.39
6	6-Sep-17	1.94	2.34	3.73	0.40	1.39
7	7-Sep-17	1.94	2.33	3.71	0.39	1.38
8	8-Sep-17	1.99	2.35	3.74	0.36	1.39
9	9-Sep-17					
10	10-Sep-17					
11	11-Sep-17	2.02	2.38	3.78	0.36	1.40
12	12-Sep-17	2.05	2.40	3.80	0.35	1.40
13	13-Sep-17	2.07	2.42	3.82	0.35	1.40
14	14-Sep-17	2.07	2.42	3.82	0.35	1.40
15	15-Sep-17	2.09	2.43	3.84	0.34	1.41
16	16-Sep-17					
17	17-Sep-17					
18	18-Sep-17	2.08	2.44	3.84	0.36	1.40
19	19-Sep-17	2.09	2.44	3.84	0.35	1.40
20	20-Sep-17	2.10	2.45	3.85	0.35	1.40
21	21-Sep-17	2.12	2.46	3.86	0.34	1.40
22	22-Sep-17	2.11	2.45	3.85	0.34	1.40
23	23-Sep-17					
24	24-Sep-17					
25	25-Sep-17	2.09	2.43	3.83	0.34	1.40
26	26-Sep-17	2.11	2.45	3.85	0.34	1.40
27	27-Sep-17	2.13	2.49	3.88	0.36	1.39
28	28-Sep-17	2.12	2.50	3.90	0.38	1.40
29	29-Sep-17	2.10	2.47	3.85	0.37	1.38
30	30-Sep-17					
31						
		2.05	2.41	3.81	0.362	1.395

Sources: Bank of Canada Bloomberg L.P. ① ②

Step 2: 10-Year Government of Canada Bond Yield Forecast

Source: Consensus Forecasts	Survey Date: September 11, 2017
September 2017	3-month 2.200 12-month 2.600 Average 2.400 %

Step 3: Long Canada Bond Forecast

10 Year Government of Canada Consensus Forecast (from Step 2)	③	2.400 %
Actual Spread of 30-year over 10-year Government of Canada Bond Yield (from Step 1)	①	0.362 %
Long Canada Bond Forecast (LCBF)	④	2.762 %

Step 4: Return on Equity (ROE) forecast

Initial ROE		9.75 %
Change in Long Canada Bond Yield Forecast from September 2009		
LCBF (September 2017) (from Step 3)	④	2.762 %
Base LCBF		4.250 %
Difference		-1.489 %
0.5 X Difference		-0.744 %
Change in A-rated Utility Bond Yield Spread from September 2009		
A-rated Utility Bond Yield Spread (September 2015) (from Step 1)	②	1.395 %
Base A-rated Utility Bond Yield Spread		1.415 %
Difference		-0.020 %
0.5 X Difference		-0.010 %
Return on Equity based on September 2017 data		9.00 %

Step 5: Deemed Long-term Debt Rate Forecast

Long Canada Bond Forecast for September 2017 (from Step 3)	④	2.762 %
A-rated Utility Bond Yield Spread September 2017 (from Step 1)	②	1.395 %
Deemed Long-term Debt Rate based on September 2017 data		4.16 %

Reference on Calculation Method:

- Appendices B and C of the *Report of the Board on Cost of Capital for Ontario's Regulated Utilities*, issued December 11, 2009.

**Ontario Energy Board
Commission de l'Énergie de l'Ontario**

**Attachment: Cost of Capital Parameter Calculations
(For rate changes effective in 2018)
Deemed Short-term Debt Rate**

Step 1: Average Annual Spread over Bankers Acceptance

Step 2: Average 3-month Bankers' Acceptance Rate

Once a year, in September, Board staff contacts prime Canadian banks to get estimates for the spread of short-term (typically 90-day) debt issuances over Bankers' Acceptance rates. Up to six estimates are provided.

Calculation of Average 3-month Bankers' Acceptance Rate during month of September 2017

A.	Average Spread over 90-day Bankers Acceptance		Date of input
Bank 1	82.5	bps	Sept., 2017
Bank 2	100.0	bps	Sept., 2017
Bank 3	100.0	bps	Sept., 2017
Bank 4	80.0	bps	Sept., 2017
Bank 5			
Bank 6			

B.	Discard high and low estimates If less than 4 estimates, take average without discarding high and low.	
Number of estimates	4	
High estimate	100.0	bps
Low estimate	80.0	bps

C.	Average annual Spread	91.250	bps	①
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Step 3: Deemed Short-Term Debt Rate Calculation

Calculate Deemed Short-term debt rate as sum of average annual spread (Step 1) and average 3-month Bankers' Acceptance Rate (Step 2)

Average Annual Spread	0.913	%	①
Average Bankers' Acceptance Rate	1.375	%	②
Deemed Short Term Debt Rate	2.29	%	

Month:	September 2017	
Day	Bankers' Acceptance Rate (%) 3-month	
1	1-Sep-17	1.27 %
2	2-Sep-17	
3	3-Sep-17	
4	4-Sep-17	
5	5-Sep-17	1.29 %
6	6-Sep-17	1.40 %
7	7-Sep-17	1.39 %
8	8-Sep-17	1.40 %
9	9-Sep-17	
10	10-Sep-17	
11	11-Sep-17	1.41 %
12	12-Sep-17	1.40 %
13	13-Sep-17	1.38 %
14	14-Sep-17	1.39 %
15	15-Sep-17	1.40 %
16	16-Sep-17	
17	17-Sep-17	
18	18-Sep-17	1.40 %
19	19-Sep-17	1.38 %
20	20-Sep-17	1.39 %
21	21-Sep-17	1.39 %
22	22-Sep-17	1.38 %
23	23-Sep-17	
24	24-Sep-17	
25	25-Sep-17	1.37 %
26	26-Sep-17	1.37 %
27	27-Sep-17	1.37 %
28	28-Sep-17	1.36 %
29	29-Sep-17	1.35 %
30	30-Sep-17	
31		1.375 %
		②

Source Bank of Canada / Statistics Canada
Series V39071

Reference on Calculation Method:

- Appendix D of the *Report of the Board on Cost of Capital for Ontario's Regulated Utilities*, issued December 11, 2009.