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BY E-MAIL AND WEB POSTING

November 22, 2018

To: All Licensed Electricity Distributors and Transmitters
All Gas Distributors
Ontario Power Generation Inc.
All Registered Intervenors in 2019 Cost-based Applications

Re: 2019 Cost of Capital Parameters

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 2019 cost-based applications (i.e. cost of service and custom incentive rate-setting (custom IR) applications, including any applicable custom IR updates). 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 2019 Rates

For cost of service and custom IR applications with effective dates in 2019, the OEB has updated the Cost of Capital parameters based on: (i) the September 2018 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, 2019 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 2019 are:

Cost of Capital Parameter	Value for Applications for rate changes in 2019
ROE	8.98%
Deemed LT Debt rate	4.13%
Deemed ST Debt rate	2.82%

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 2019 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.

The OEB reviews its methodology for the cost of capital every five years. As outlined in its business plan, the OEB is undertaking work to update its regulatory framework to support the evolution of the sector, including consideration for remunerating utilities in ways that strengthen their focus on long-term value, and requiring utilities to reflect the impact of sector transformation in their planning and operations. The OEB intends to undertake a review of its cost of capital policies following the OEB's determinations on any regulatory reforms stemming from this work.

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 2019)
Cost of Capital Parameter Calculations
Return on Equity and Deemed Long-term Debt Rate**

Step 1: Analysis of Business Day Information in the Month

Month:		September 2018				
Day		Bond Yields (%)		Bond Yield Spreads (%)		
		Government of Canada 10-yr	30-yr	A-rated Utility 30-yr	30-yr Govt over 10-yr Govt	30-yr Util over 30-yr Govt
1	1-Sep-18					
2	2-Sep-18					
3	3-Sep-18					
4	4-Sep-18	2.23	2.25	3.65	0.02	1.40
5	5-Sep-18	2.24	2.26	3.66	0.02	1.40
6	6-Sep-18	2.23	2.25	3.66	0.02	1.41
7	7-Sep-18	2.29	2.30	3.71	0.01	1.41
8	8-Sep-18					
9	9-Sep-18					
10	10-Sep-18	2.28	2.30	3.71	0.02	1.41
11	11-Sep-18	2.32	2.34	3.75	0.02	1.41
12	12-Sep-18	2.33	2.35	3.76	0.02	1.41
13	13-Sep-18	2.32	2.35	3.76	0.03	1.41
14	14-Sep-18	2.34	2.36	3.77	0.02	1.41
15	15-Sep-18					
16	16-Sep-18					
17	17-Sep-18	2.34	2.35	3.78	0.01	1.43
18	18-Sep-18	2.38	2.40	3.82	0.02	1.42
19	19-Sep-18	2.42	2.43	3.85	0.01	1.42
20	20-Sep-18	2.42	2.43	3.86	0.01	1.43
21	21-Sep-18	2.43	2.44	3.86	0.01	1.42
22	22-Sep-18					
23	23-Sep-18					
24	24-Sep-18	2.44	2.45	3.88	0.01	1.43
25	25-Sep-18	2.46	2.47	3.89	0.01	1.42
26	26-Sep-18	2.42	2.42	3.84	0.00	1.42
27	27-Sep-18	2.41	2.41	3.84	0.00	1.43
28	28-Sep-18	2.42	2.41	3.84	-0.01	1.43
29	29-Sep-18					
30	30-Sep-18					
31						
		2.35	2.37	3.78	0.013	1.416

Sources: Bank of Canada Bloomberg L.P.

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

Source: Consensus Forecasts	Survey Date: September 10, 2018
September 2018	3-month 2.500 12-month 2.900 Average 2.700 %

Step 3: Long Canada Bond Forecast

10 Year Government of Canada Consensus Forecast (from Step 2)	2.700 %
Actual Spread of 30-year over 10-year Government of Canada Bond Yield (from Step 1)	0.013 %
Long Canada Bond Forecast (LCBF)	2.713 %

Step 4: Return on Equity (ROE) forecast

Initial ROE	9.75 %
Change in Long Canada Bond Yield Forecast from September 2009	
LCBF (September 2018) (from Step 3)	2.713 %
Base LCBF	4.250 %
Difference	-1.537 %
0.5 X Difference	-0.768 %
Change in A-rated Utility Bond Yield Spread from September 2009	
A-rated Utility Bond Yield Spread (September 2015) (from Step 1)	1.416 %
Base A-rated Utility Bond Yield Spread	1.415 %
Difference	0.001 %
0.5 X Difference	0.001 %
Return on Equity based on September 2018 data	8.98 %

Step 5: Deemed Long-term Debt Rate Forecast

Long Canada Bond Forecast for September 2018 (from Step 3)	2.713 %
A-rated Utility Bond Yield Spread September 2018 (from Step 1)	1.416 %
Deemed Long-term Debt Rate based on September 2018 data	4.13 %

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

**Attachment: Cost of Capital Parameter Calculations
(For rate changes effective in 2019)**

**Cost of Capital Parameter Calculations
Deemed Short-term Debt Rate**

**Step 1: Average Annual Spread over Bankers
Acceptance**

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.

A.	Average Spread over 90-day Bankers Acceptance		Date of input
Bank 1	100.0	bps	Sept., 2018
Bank 2	80.0	bps	Sept., 2018
Bank 3			
Bank 4			
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	2	
High estimate	100.0	bps
Low estimate	80.0	bps

C.	Average annual Spread	90.000	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	0.900	%	①
Average Bankers' Acceptance Rate	1.923	%	②
Deemed Short Term Debt Rate	2.82	%	

Step 2: Average 3-month Bankers' Acceptance Rate

Calculation of Average 3-month Bankers' Acceptance Rate during month of September 2018

Month:	September 2018	
		Bankers' Acceptance Rate (%) 3-month
Day		
1	1-Sep-18	
2	2-Sep-18	
3	3-Sep-18	Bank holiday
4	4-Sep-18	1.92 %
5	5-Sep-18	1.92 %
6	6-Sep-18	1.92 %
7	7-Sep-18	1.92 %
8	8-Sep-18	
9	9-Sep-18	
10	10-Sep-18	1.92 %
11	11-Sep-18	1.92 %
12	12-Sep-18	1.92 %
13	13-Sep-18	1.92 %
14	14-Sep-18	1.92 %
15	15-Sep-18	
16	16-Sep-18	
17	17-Sep-18	1.92 %
18	18-Sep-18	1.92 %
19	19-Sep-18	1.92 %
20	20-Sep-18	1.92 %
21	21-Sep-18	1.92 %
22	22-Sep-18	
23	23-Sep-18	
24	24-Sep-18	1.92 %
25	25-Sep-18	1.92 %
26	26-Sep-18	1.93 %
27	27-Sep-18	1.94 %
28	28-Sep-18	1.94 %
29	29-Sep-18	
30	30-Sep-18	
31		1.923 %
		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.