

**Manitoba Hydro**

**Book of Documents**

**MPA**

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**TAB 1**



1 **REFERENCE: Appendix 9.3 Economic Evaluation Documentation; Section: 1.4; Section**  
2 **1.2**

4 **QUESTION:**

5 Please provide the supporting calculations related to the imputed interest rate associated with  
6 equity used in the RWACC.

8 **RESPONSE:**

9 Manitoba Hydro's WACC is calculated using Manitoba Hydro's corporate approved forecast of  
10 long-term interest rates associated with debt and the imputed interest rate associated with  
11 equity, which are then weighted by the corporation's target capital structure of 75% debt and  
12 25% equity. A long-term inflation rate of 1.9% for 2012 and 2.0% for 2013 is utilized to  
13 determine the WACC in real terms (i.e. without the effect of inflation) using the calculation as  
14 shown in PUB-0165a.

16 The schedule below demonstrates the derivation of Manitoba Hydro's WACC both in nominal  
17 and real terms used for the NFAT 2012 analysis and 2013 update.

NFAT 2012					
Capital Source	Target Capital Structure	Nominal Rates		Real Rates	
		Rate	Weighted Rate	Rate	Weighted Rate
CDN 10 Year+Bond Yield	75%	4.65%	4.73%	4.32%	3.24%
10 Year+ Credit Spread		0.65%			
Provincial Guarantee Fee		1.00%			
<b>Long-Term Debt</b>		6.30%			
Long Term Debt	25%	6.30%	2.33%	7.26%	1.82%
Imputed Cost of Equity		3.00%			
<b>Equity</b>		9.30%			
<b>Total</b>	100%	7.05%		5.05%	

19

1

2013 Update					
Capital Source	Target Capital Structure	Nominal Rates		Real Rates	
		Rate	Weighted Rate	Rate	Weighted Rate
CDN 10 Year+ Bond Yield		5.05%			
10 Year+ Credit Spread		0.70%			
Provincial Guarantee Fee		1.00%			
<b>Long-Term Debt</b>	75%	6.75%	5.05%	4.65%	3.50%
Long Term Debt		6.75%			
Imputed Cost of Equity		3.00%			
<b>Equity</b>	25%	9.75%	2.45%	7.60%	1.90%

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<b>Total</b>	100%	<u>7.50%</u>		<u>5.40%</u>	
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**TAB 2**





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## BY E-MAIL AND WEB POSTING

November 25, 2013

To: All Licensed Electricity Distributors and Transmitters  
All Gas Distributors  
Ontario Power Generation Inc.  
All Registered Intervenors in 2014 Cost of Service Applications

### Re: Cost of Capital Parameter Updates for 2014 Cost of Service Applications

The Ontario Energy Board (the "Board") 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 2014 cost of service 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* (the "Cost of Capital Report"), issued December 11, 2009.

### Cost of Capital Parameters for 2014 Rates

For rates with effective dates in 2014, the Board has updated the Cost of Capital parameters based on: (i) the September 2013 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 Short-Term debt rate; and (ii) data three months prior to January 1, 2014 from the Bank of Canada, *Consensus Forecasts*, and Bloomberg LLP, for all Cost of Capital parameters.

The Board has determined that the updated Cost of Capital parameters for 2014 cost of service rate applications for rates with effective in 2014 are:

Cost of Capital Parameter	Value for 2014 Cost of Service Applications for rate changes in 2014
ROE	9.36%
Deemed LT Debt rate	4.88%
Deemed ST Debt rate	2.11%

Detailed calculations of the Cost of Capital parameters are attached.

The Board 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 Board intends to update Cost of Capital parameters for setting rates in cost of service applications only once per year. For this reason, the Cost of Capital parameters above will be applicable for all cost of service applications with rates effective in the 2014 calendar year.

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

All queries on the Cost of Capital parameters should be directed to the Board's Market Operations hotline, at 416 440-7604 or [market.operations@ontarioenergyboard.ca](mailto:market.operations@ontarioenergyboard.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 Cost of Service rate changes effective in 2014)**

**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 2013		Bond Yields (%)			Bond Yield Spreads (%)	
Day		Government of Canada		A-rated Utility	30-yr Govt over 10-yr Govt	30-yr Util over 30-yr Govt
		10-yr	30-yr	30-yr		
1	1-Sep-13					
2	2-Sep-13					
3	3-Sep-13	2.68	3.15	4.61	0.47	1.46
4	4-Sep-13	2.71	3.18	4.63	0.47	1.45
5	5-Sep-13	2.80	3.25	4.72	0.45	1.47
6	6-Sep-13	2.76	3.23	4.70	0.47	1.47
7	7-Sep-13					
8	8-Sep-13					
9	9-Sep-13	2.74	3.22	4.69	0.48	1.47
10	10-Sep-13	2.82	3.28	4.75	0.46	1.47
11	11-Sep-13	2.78	3.26	4.73	0.48	1.47
12	12-Sep-13	2.78	3.26	4.73	0.48	1.47
13	13-Sep-13	2.76	3.25	4.73	0.49	1.48
14	14-Sep-13					
15	15-Sep-13					
16	16-Sep-13	2.79	3.28	4.76	0.49	1.48
17	17-Sep-13	2.77	3.26	4.77	0.49	1.51
18	18-Sep-13	2.70	3.21	4.69	0.51	1.48
19	19-Sep-13	2.70	3.22	4.74	0.52	1.52
20	20-Sep-13	2.69	3.20	4.69	0.51	1.49
21	21-Sep-13					
22	22-Sep-13					
23	23-Sep-13	2.65	3.17	4.67	0.52	1.50
24	24-Sep-13	2.59	3.11	4.63	0.52	1.52
25	25-Sep-13	2.57	3.09	4.60	0.52	1.51
26	26-Sep-13	2.58	3.10	4.61	0.52	1.51
27	27-Sep-13	2.55	3.08	4.56	0.53	1.48
28	28-Sep-13					
29	29-Sep-13					
30	30-Sep-13	2.54	3.07	4.56	0.53	1.49
31						
		2.70	3.19	4.68	0.496	1.483

Sources: Bank of Canada    Bloomberg L.P.

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

Source: Consensus Forecasts	Publication Date: September 9, 2013
September 2013	Average
3-month: 2.700	12-month: 3.100
Average: 2.900 %	

**Step 3: Long Canada Bond Forecast**

10 Year Government of Canada Consensus Forecast (from Step 2)	2.900 %
Actual Spread of 30-year over 10-year Government of Canada Bond Yield (from Step 1)	0.496 %
Long Canada Bond Forecast (LCBF)	3.396 %

**Step 4: Return on Equity (ROE) forecast**

Initial ROE	9.75 %
Change in Long Canada Bond Yield Forecast from September 2009	
LCBF (September 2013) (from Step 3)	3.396 %
Base LCBF	4.250 %
Difference	-0.855 %
0.5 X Difference	-0.427 %
Change in A-rated Utility Bond Yield Spread from September 2009	
A-rated Utility Bond Yield Spread (September 2013) (from Step 1)	1.483 %
Base A-rated Utility Bond Yield Spread	1.415 %
Difference	0.068 %
0.5 X Difference	0.034 %
<b>Return on Equity based on September 2013 data</b>	<b>9.36 %</b>

**Step 5: Deemed Long-term Debt Rate Forecast**

Long Canada Bond Forecast for September 2013 (from Step 3)	3.396 %
A-rated Utility Bond Yield Spread September 2013 (from Step 1)	1.483 %
<b>Deemed Long-term Debt Rate based on September 2013 data</b>	<b>4.88 %</b>

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

**Attachment: Cost of Capital Parameter Calculations  
(For Cost of Service rate changes effective in 2014)**

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

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

Once a year, in January, 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., 2013
Bank 2	100.0	bps	Sept., 2013
Bank 3	82.5	bps	Sept., 2013
Bank 4	80.0	bps	Sept., 2013
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

**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	1.200	%	②
<b>Deemed Short Term Debt Rate</b>	<b>2.11</b>	<b>%</b>	

**Step 2: Average 3-month Bankers' Acceptance Rate**

Calculation of Average 3-month Bankers' Acceptance Rate during month of September 2013

Month:	September 2013	
Day	Bankers' Acceptance Rate (%) 3-month	
1	1-Sep-13	
2	2-Sep-13	Bank holiday %
3	3-Sep-13	1.20 %
4	4-Sep-13	1.20 %
5	5-Sep-13	1.20 %
6	6-Sep-13	1.20 %
7	7-Sep-13	
8	8-Sep-13	
9	9-Sep-13	1.20 %
10	10-Sep-13	1.20 %
11	11-Sep-13	1.20 %
12	12-Sep-13	1.20 %
13	13-Sep-13	1.20 %
14	14-Sep-13	
15	15-Sep-13	
16	16-Sep-13	1.20 %
17	17-Sep-13	1.20 %
18	18-Sep-13	1.20 %
19	19-Sep-13	1.20 %
20	20-Sep-13	1.20 %
21	21-Sep-13	
22	22-Sep-13	
23	23-Sep-13	1.20 %
24	24-Sep-13	1.20 %
25	25-Sep-13	1.20 %
26	26-Sep-13	1.20 %
27	27-Sep-13	1.20 %
28	28-Sep-13	
29	29-Sep-13	
30	30-Sep-13	1.20 %
31		
		<b>1.200</b> %
		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.

**TAB 3**





## **2013 Generic Cost of Capital**

**2014 Interim Return on Equity**

**December 19, 2013**

**The Alberta Utilities Commission**

Decision 2013-459: 2013 Generic Cost of Capital

2014 Interim Return on Equity

Application No. 1608918

Proceeding ID No. 2191

December 19, 2013

Published by

The Alberta Utilities Commission

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## **1 Introduction and background**

1. In Decision 2011-474,<sup>1</sup> the Alberta Utilities Commission (the AUC or the Commission) set the approved return on equity (ROE) for Commission-regulated utilities subject to that decision at 8.75 per cent on a final basis for 2011 and 2012, and on an interim basis for 2013. The decision also set out common equity ratios for each utility for 2011 and 2012 which were to remain in effect until changed by the Commission.

2. On November 9, 2012, the Commission suspended the 2013 Generic Cost Of Capital (2013 GCOC) proceeding after consideration of a joint submission received from the Alberta Utilities (collectively, AltaGas Utilities Inc., AltaLink Management Ltd., ATCO Utilities, ENMAX Power Corporation, EPCOR Utilities Inc. and FortisAlberta Inc.). The submission was also supported by the Office of the Utilities Consumer Advocate (UCA). The Alberta Utilities submitted that it was not possible to prepare evidence and conduct a GCOC proceeding until final decisions were issued in the Performance-Based Regulation compliance proceeding (Proceeding ID No. 2130), the Capital Tracker proceeding (Proceeding ID No. 2131) and the Utility Asset Disposition proceeding (Proceeding ID No. 20).

3. By way of a letter dated April 4, 2013, the Commission recommenced the 2013 GCOC proceeding based on the status at that time of the proceedings identified in the joint submission and in recognition of the need to minimize regulatory lag in dealing with cost of capital matters.

4. In a letter dated April 23, 2013, the Commission indicated that the date for evidentiary submissions would be set, by way of subsequent correspondence, at approximately three weeks from the release of the later of the Capital Tracker (Proceeding ID No. 2131) and Utility Asset Disposition (Proceeding ID No. 20) decisions.

5. Decision 2013-417<sup>2</sup> in the Utility Asset Disposition proceeding was issued on November 26, 2013. Decision 2013-435<sup>3</sup> in the Capital Tracker proceeding was issued on December 6, 2013.

6. On December 18, 2013, the Commission approved a request from The City of Calgary, the UCA and the Alberta Utilities for an extension of the date for filing of evidence to January 31, 2014. In the letter, the Commission provided an updated process schedule which included an oral hearing scheduled for early summer.

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<sup>1</sup> Decision 2011-474: 2011 Generic Cost of Capital, Application No. 1606549, Proceeding ID No. 833, December 8, 2011.

<sup>2</sup> Decision 2013-417: Utility Asset Disposition, Application No. 1566373, Proceeding ID No. 20, November 26, 2013.

<sup>3</sup> Decision 2013-435: Distribution Performance-Based Regulation, 2013 Capital Tracker Applications, Application No. 1608827, Proceeding ID No. 2131, December 6, 2013.

## Commission findings

7. The revised process schedule suggests that a decision in the 2013 GCOC proceeding is unlikely to be available until at least the fourth quarter of 2014. The Commission also notes that several recent decisions have directed the use of 8.75 per cent as a ROE placeholder in 2014.<sup>4</sup> Accordingly, the Commission considers that an extension of the interim 2013 generic ROE of 8.75 per cent is required as an ROE placeholder for 2014 and for such time thereafter as may be required until the present proceeding is completed.

## 2 Order

8. It is hereby ordered that:

- (1) The Generic ROE for all utilities subject to Decision 2011-474 is set at 8.75 per cent on an interim basis for 2014 and for each subsequent year thereafter until otherwise directed by the Commission.

Dated on December 19, 2013.

## The Alberta Utilities Commission

*(original signed by)*

Mark Kolesar  
Vice-Chair

*(original signed by)*

Bill Lyttle  
Commission Member

*(original signed by)*

Tudor Beattie, QC  
Commission Member

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<sup>4</sup> Decision 2013-430: ATCO Pipelines, 2013-2014 General Rate Application, Application No. 1609158, Proceeding ID No. 2322, December 4, 2013;  
Decision 2013-407: AltaLink Management Ltd., 2013-2014 General Tariff Application, Application No. 1608711, Proceeding ID No. 2044, November 12, 2013;  
Decision 2013-358: ATCO Electric Ltd., 2013-2014 Transmission General Tariff Application, Application No. 1608610, Proceeding ID No. 1989, September 24, 2013.

**Appendix 1 – Proceeding participants**

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