

**EB-2016-0105**

**Thunder Bay Hydro Electricity  
Distribution Inc.  
Application for electricity distribution  
rates beginning May 1, 2017**

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**VULNERABLE ENERGY CONSUMERS COALITION**

**("VECC")**

**CROSS-EXAMINATION  
PANEL**

**COST OF CAPITAL PANEL**

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**June 29, 2017**

## **TAB 1**

## 5.0-VECC-41

Reference: E5/ Attachment 5-A

- a) Please update Appendix 2-OA using the Board cost of capital parameters for short-term debt issued on October 27, 2016 and the weighted long-term debt rate calculated with the 2017 debenture rate of 3.93%.

### Thunder Bay Hydro Response:

- a) The 2017 portion of Appendix 2-OA has been reproduced below. The table reflects the updated Cost of Capital parameters for short-term debt, the ROI and the 3.93% for the long-term debt.

		Year: 2017			
Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		(%)	(\$)	(%)	(\$)
	<b>Debt</b>				
1	Long-term Debt	56.00%	\$62,830,836	2.07%	\$1,300,598
2	Short-term Debt	4.00% (1)	\$4,487,917	1.76%	\$78,987
3	<b>Total Debt</b>	60.0%	\$67,318,753	2.05%	\$1,379,586
	<b>Equity</b>				
4	Common Equity	40.00%	\$44,879,168	8.78%	\$3,940,391
5	Preferred Shares		\$ -		\$ -
6	<b>Total Equity</b>	40.0%	\$44,879,168	8.78%	\$3,940,391
7	<b>Total</b>	100.0%	\$112,197,921	4.74%	\$5,319,977

## 5.0-VECC-39

Reference: E5/pg.5-7

- a) Has Thunder Bay Hydro completed the planned debenture expected to be in place September 15, 2016? If yes please update for the actual rate if different from the 3.58% shown in Table 5-2.
- b) Please update Table 5-2 with the most recent debenture information.

### Thunder Bay Hydro Response:

- a) Thunder Bay Hydro has not yet completed the planned debenture. Thunder Bay Hydro shareholder approval for the financing is expected at a City Council meeting February 13th. Revised placement of the financing is March 1<sup>st</sup>.
- b) Thunder Bay Hydro has prorated the 2016 financing to March 1<sup>st</sup> and has used the current IO rate of 3.88% for this debenture. Additionally the rate for the 2017 debenture has been adjusted to the 3.72% (Board approved Cost of Capital parameters) for purposes of producing the following table.

Weighted Debt Cost								
Line No.	Description	Debt Holder	Affiliated with LDC?	Date of Issuance	Principal	Term (Years)	Rate%	Interest Cost
1	Promissory Note	The Corporation of the City of Thunder Bay	Y	9-Apr-13	\$26,490,500	0	0.00%	\$0
2	Credit Facility Agreement	TD Commercial Bank	N	3-Jul-09	\$4,822,104	15	5.27%	\$254,125
3	Promissory Note	Infrastructure Ontario	N	17-Jun-13	\$5,424,319	30	4.04%	\$219,142
4	Promissory Note	Infrastructure Ontario	N	15-Oct-14	\$5,926,275	30	3.96%	\$234,680
5	Promissory Note	Infrastructure Ontario	N	15-Mar-16	\$3,963,384	30	3.75%	\$148,627
6	Promissory Note	Unknown	N	1-Mar-17	\$2,995,468	30	3.88%	\$116,224
7	Promissory Note	Unknown	N	1-Apr-17	\$2,783,167	30	3.72%	\$103,534
8	<b>2017 Total Long Term Debt</b>				<b>\$52,405,217</b>	<b>Total Interest Cost</b>		<b>\$1,076,333</b>
9								
10					<b>Weighted Debt Cost Rate-2017</b>			<b>2.05%</b>
11								

## 5.0-VECC-40

Reference: E5/pg. 7

- a) The current (December 27) LDC lending rates for long-term loans are between 3.31% (15 year serial) and 3.93% (30 year amortizer). Given this please explain the basis for the forecast 4.54% used in Table 5-2 for calculating the weighted cost of debt.
- b) Please update Table 5-2 using a forecast rate for the 2017 debenture of \$2,783,167 of 3.93%.

### Thunder Bay Hydro Response:

- a) Thunder Bay Hydro was simply guided by the OEB Approved Cost of Capital parameters given the uncertainty with respect to future debt rates.
- b) The following table updates the 2017 debenture using 3.93%. The change from the 4.54% to the 3.93% resulted in a funding for ROD change of approximately \$17K.

Line No.	Description	Debt Holder	Affiliated with LDC?	Date of Issuance	Principal	Term (Years)	Rate%	Interest Cost
1	Promissory Note	The Corporation of the City of Thunder Bay	Y	9-Apr-13	\$26,490,500	0	0.00%	\$0
2	Credit Facility Agreement	TD Commercial Bank	N	3-Jul-09	\$4,822,104	15	5.27%	\$254,125
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5	Promissory Note	Infrastructure Ontario	N	15-Mar-16	\$3,963,384	30	3.75%	\$148,627
6	Promissory Note	Unknown	N	15-Sep-16	\$3,594,562	30	3.58%	\$128,685
7	Promissory Note	Unknown	N	1-Apr-17	\$2,783,167	30	3.93%	\$109,378
8	<b>2017 Total Long Term Debt</b>				<b>\$53,004,311</b>	<b>Total Interest Cost</b>		<b>\$1,094,639</b>
9								
10					<b>Weighted Debt Cost Rate-2017</b>		<b>2.07%</b>	
11								

## **TAB 2**

**5.0-SEC-32****Ref: Exhibit Five, page 6**

[5, p. 6] The Rate Minimization Model, which binds the board of directors of the Applicant through the Shareholder Declaration, prohibits the inclusion in rates of the “allowable regulated return on shareholder equity”. The current Application seeks to include in rates the full allowed ROE. Please provide the amendment to the Shareholder Declaration, or other documentary evidence, showing that the City of Thunder Bay has legally modified the Rate Minimization Model to allow the inclusion in rates of full ROE. If no such documentary evidence is available, please provide evidence that the Applicant has the legal authority under its constating documents to seek approval for inclusion of full ROE in its rates starting in 2017.

**Thunder Bay Hydro Response:**

No amendments to the Shareholder Declaration are required to allow for the inclusion of the full ROE in rates as set out in the Application.

The Rate Minimization Model is one of the principles stipulated in Section 2.2 of the Shareholder Declaration which Thunder Bay Hydro must comply with.

Rate Minimization Model “means a Shareholder philosophy of minimizing electricity rates for customers of DistributionCo by having these rates reflect the Shareholder forgoing its allowable regulated return on shareholder equity from DistributionCo and forgoing payment of interest or principal on long term debt held in DistributionCo by the Shareholder.”

In simple terms, the Rate Minimization Model prohibits the payment of dividends, interest or principle to the Shareholder. **Thunder Bay Hydro is and will comply with the Rate Minimization Model. The Application demonstrates this: Thunder Bay Hydro does not forecast the payment of any dividends, interest or principle to the Shareholder. Doing otherwise would be in violation of the Rate Minimization Model.**

However, Section 2.2 the Shareholder Declaration includes other principles that Thunder Bay Hydro must also comply with. For example, Thunder Bay Hydro must operate and maintain a reliable, effective and efficient electricity distribution system; and must maintain a prudent financial structure which is consistent with sound financial principles and is established on the basis that it

will require no additional investment by the Shareholder, except where the Shareholder otherwise determines.

Thunder Bay Hydro has included in its Application a comprehensive five (5) year distribution system plan that details a capital program that is needed to ensure Thunder Bay Hydro can meet its obligation to operate and maintain a reliable, effective and efficient electricity distribution system.

The Application is intended, in part, to fund this capital program. Thunder Bay Hydro has no other way to recover funding for its capital program in rates except through the Board's cost of capital mechanism.

This is why the Application is seeking inclusion of the Board's allowed ROE: these funds are necessary to include in retained earnings to finance the capital program set out in the Application.



**Smart Meters:**

2013 smart meter costs are included the 2013 rate base and revenue requirement. Thunder Bay Hydro is also requesting the recovery of stranded meter amounts as outlined in Exhibit 9 of this Application.

**Capital Structure**

Thunder Bay Hydro is requesting the continuation of its current deemed capital structure of 40% Equity, 4% Short Term Debt, 56% Long Term Debt.

**Return on Equity**

Thunder Bay Hydro has assumed a return on equity of 7.00% which is lower than the 9.12% in the Cost of Capital Parameter Updates for 2012 Cost of Service Applications issued by the OEB on March 2, 2012; however, this rate is sufficient to fund the capital investment and operating and maintenance cost requirements. The Corporation of the City of Thunder Bay, the sole shareholder of Thunder Bay Hydro Corporation (shareholder of Thunder Bay Hydro) provides the following governing principle in the Shareholder Declaration:

"DistributionCo shall be operated in accordance with the Rate Minimization Model."

*Rate Minimization Model* means a Shareholder philosophy of minimizing electricity rates for customers of DistributionCo by having these rates reflect the Shareholder forgoing its allowable regulated return on shareholder equity from DistributionCo and forgoing payment of interest or principal on long term debt held in DistributionCo by the Shareholder.

Consistent with this principle, essentially to keep electricity rates as low as possible and to encourage economic development by foregoing debt and dividend payments, the Note Payable to the City of Thunder Bay was set up without any provision for the payment of interest or the repayment of principal. Additionally, the Corporation of the City of Thunder Bay does not seek a dividend from Thunder Bay Hydro.

**Performance Category: Connection of Renewable Generation**

**TABLE 1-11: SCORECARD PERFORMANCE CATEGORY: RENEWABLE GENERATION**

Measure	2011	2012	2013	2014	2015
Renewable Generation Connection Impact Assessments Completed On Time	100.0%	100.0%	-	100.0%	100.0%
New Micro-embedded Generation Facilities Connected On Time			100.0%	100.0%	100.0%

A significant strength of Thunder Bay Hydro is the expertise that the staff have developed, as well the resources required to complete Connection Impact Assessments required to evaluate embedded generation projects, has adjusted in response to FIT requirements. As generation projects proceed, expertise is being developed on embedded generation operating issues and these considerations will be integrated into design guidelines, operating procedures, the Distribution System Plan, and System Maintenance plans. The outcome has been successful, as all renewable targets have been achieved.

**Connection of Renewable Generation -Renewable Generation Connection Impact Assessments**

A Connection Impact Assessment is required for all facilities that have a nameplate rated capacity of greater than 10KW. Thunder Bay Hydro has completed all such requests within the time allowed under the Distribution System Code.

**Connection of Renewable Generation -New Micro-Embedded Generation Facilities Connected on Time**

Thunder Bay Hydro is required to connect an applicant's micro-embedded generation facility to its distribution system within five business days of the applicant informing the distributor that it has satisfied all applicable services. This target has been fully met.

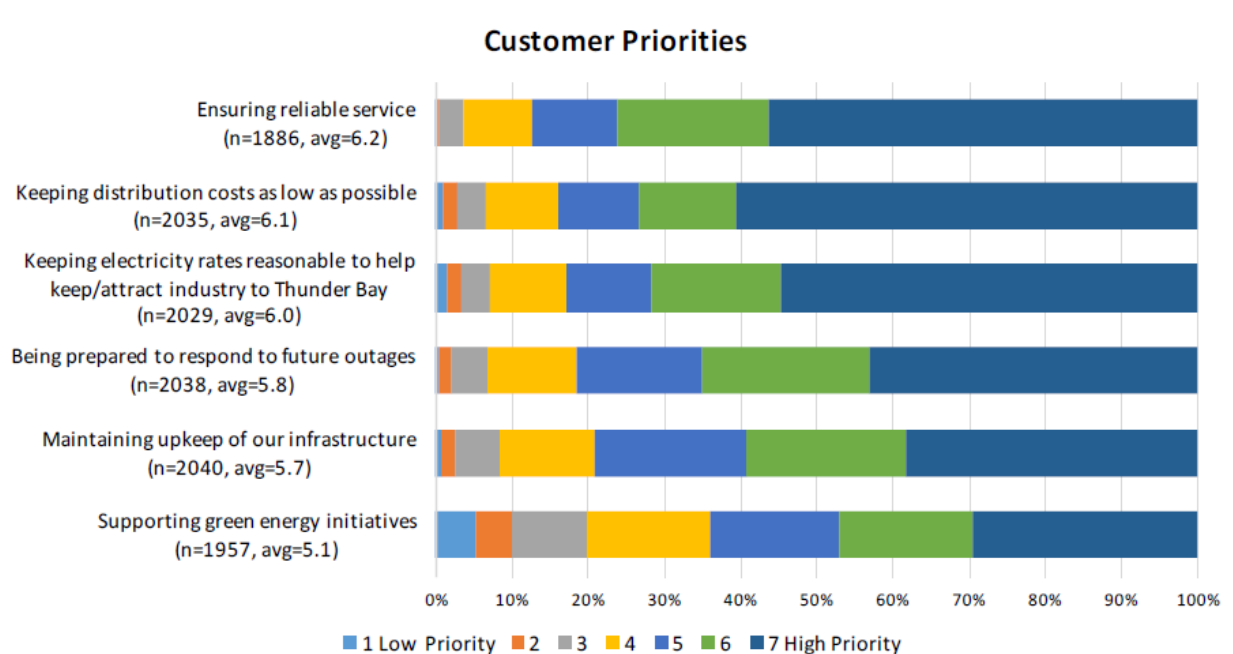
**Performance Category: Financial Ratios**

**TABLE 1-12: SCORECARD PERFORMANCE CATEGORY: FINANCIAL RATIOS**

Measures		2011	2012	2013	2014	2015
Liquidity: Current Ratio (Current Assets/Current Liabilities)		1.85	1.72	1.62	1.85	1.61
Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		0.86	0.81	0.66	0.72	0.75
Profitability: Regulatory Return on Equity	Deemed (included in rates)	3.75%	3.75%	7.00%	7.00%	7.00%
	Achieved	7.24%	7.74%	6.34%	5.99%	5.69%

## **TAB 3**

1 **TABLE 1-16: CUSTOMER TOP PRIORITIES**



As discussed in Section 1.4.1 of this Exhibit, the second phase of the customer engagement survey was used to focus on the four investment categories outlined within the DSP. These sections were System Renewal, System Service, System Access, and General Investments. All four of these sections were described within the survey and the customer was asked for their opinion about the importance, urgency and appropriateness of Thunder Bay Hydro's plans for each. Please note that System Service and System Access were combined for simplicity as these sections relate to the overall health of the System and the connection to Thunder Bay Hydro's customers. The final question for each investment category outlined Thunder Bay Hydro's planned expenditures, including a statement which outlined the historical expenditure of each investment. The question and response for each investment category are as follows:

## System Renewal

Table 1-17 below provides the customers' response to the survey question below.

**Q5. Do you think the proposed increase in investment in the System Renewal area is appropriate?**  
**Please select one of the following options (circle one):**