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April 10, 2012

Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Responses to Board Staff Interrogatories; Thunder Bay
Hydro Electricity Distribution Inc. ("TBHEDI") Smart Meter Cost
Recovery Application EB-2012-0015**

This letter acknowledges receipt of the Vulnerable Energy Consumers Coalition (VECC) Final Submissions dated March 28, 2012. Thunder Bay Hydro Electricity Distribution Inc. submits two (2) paper copies of its responses to the VECC's Final Submissions.

An electronic copy has been submitted through the OEB's RESS on-line filing system and via email, including a copy to all Intervenors.

Should you require any additional information, please do not hesitate to contact the undersigned.

Yours truly,

A handwritten signature in cursive script that reads "Cindy Speziale".

Cindy Speziale, CA
Vice President, Finance

cc: Robert Mace, President, Thunder Bay Hydro Electricity Distribution Inc.
Michael Buonaguro, Counsel for Vulnerable Energy Consumers Coalition (VECC)

ONTARIO ENERGY BOARD

IN THE MATTER OF

the *Ontario Energy Board Act*, 1998, S.O. 1998, c. 15 (Schedule B), as amended;

AND IN THE MATTER OF an Application by

Thunder Bay Hydro Electricity Distribution Inc. (Thunder Bay) for an order or orders approving or fixing just and reasonable distribution rates to be effective May 1, 2012 to reflect the recovery of costs for deployed smart meters.

Information Requests of the Vulnerable Energy Consumers Coalition (VECC)

VECC Question # 1

Reference: Application, 2. Status of Implementation of Smart Meters, Page 4

Preamble: As at November 30, 2011, Thunder Bay has installed 49,440 meters for nearly 100% completion with the exception of a small number of customer refusals and installation-related technical issues.

- a) Please confirm the remaining meters to be installed by customer class to reach 100% completion.

Response:

- a) As at December 31, 2011, Thunder Bay has installed 49,485 meters and has deemed to be 100% complete in its installations including the meters that previously formed the exception.

VECC Question # 2

Reference: Application, Smart Meter Program Status, Page 4

- a) Please summarize the types of meters installed for each rate class.
- b) Please complete the following table to show the average installed cost per meter type based on 1.1.1 and 1.1.2 capital costs from the smart meter model.

Class	Type of Meter	Quantity	Meter Cost	Installation	Installed Cost	Average Cost
Residential						
GS<50 kW						

- c) Please provide average costs by meter type for each customer class based on total capital costs.

Response

- a) As discussed in its Application dated January 13, 2012, Thunder Bay procured all of the smart meters from Elster Intergrated Solutions, LLC ("Elster"). A summary of the type of meters purchased and installed by rate class is provided in the table below:

Residential	GS < 50 kW
REX2-2S-4 jaw	A3 3S
REX2-2SD-4 jaw	A3 9S
REX2-12S-5 jaw	A3 12S
REX2-12SD-5 jaw	A3 16S
A3-3S-4 jaw transformer rated	A3 35S
	A3 36S

- b) Thunder Bay is not able to segregate the costs as requested as they were aggregated and not recorded separately by rate class. However, Thunder Bay has provided the consolidated data in the table below:

Class	Type of Meter	Quantity	Meter Cost	Installation	Installed Cost	Average Cost
		A	B	C	C/A	(B+C)/A
Residential & GS<50kW	As listed in 2a)	49,485	5,772,463	915,065	\$18.49	\$135.14

- c) As discussed in its response in b), Thunder Bay is not able to provide average costs by meter type for each customer class based on total capital costs as it only has aggregated costs. However, Thunder Bay has calculated the average capital cost per installed meter below:

	<u>\$</u>	<u>\$/meter</u>
Total Capital Costs - minimum functionality	\$8,110,278.01	\$163.89
Total Capital Costs - beyond minimum functionality	\$21,362.38	\$0.43
TOTAL	\$8,131,640.39	\$164.33
 Number of Installed Meters as at Dec. 31/11	 49,485	

VECC Question # 3

Reference: Application, Smart Meter Program Status, Page 4

- a) Please discuss if any meters were installed by Thunder Bay staff and if so, please provide meter quantities by year by customer class and associated costs. Please advise if these costs are included in this application.
- b) Please discuss the incremental internal labour costs incurred by Thunder Bay to deploy smart meters that are included in this application. Include the cost, number of positions (permanent vs. contract, full-time vs. part-time), position type and work activities.

Response

- a) On page 4 of its Application, Thunder Bay stated that a contract was obtained with Olameter Inc. to install the smart meters. However, Thunder Bay did incur internal labour costs for installation of meters that had access issues, a service upgrade was needed to meet the configuration requirements of the smart meter, or the installation was more challenging than most meters.

The table below summarizes the number of meters by rate class that were installed by internal staff and the associated costs that have been included in this application:

Meters Installed by Internal Staff	<u>2009</u>	<u>2010</u>	<u>2011</u>
Residential	0	1182	0
GS < 50 kW	990	148	96
Total	990	1330	96

Internal Installation Costs

Capital	\$210,380	\$172,525	\$74,923
OM&A	\$25	\$0	\$533
Total	<u>\$210,404</u>	<u>\$172,525</u>	<u>\$75,456</u>

- b) Thunder Bay hired one full-time AMI Data Coordinator to implement and manage the various data integration pieces required to ensure the proper and accurate flow of meter data from the meters through to customer billings. Work activities include ensuring full systems synchronizations, obtaining automation pieces, troubleshooting and rectifying communications issues and ensuring the Billing Department receives bill ready meter data.

In addition to the labour costs discussed in its response to 3a), there were 2 full-time staff members in the billing department that were verifying meter data,

testing the flow of data throughout the system, and integrating the data to the MDM/R. Thunder Bay also had a full-time project coordinator that oversaw the entire smart meter program. For all the costs that are OM&A, those employees' regular duties had to be backfilled by part-time staff or through overtime. The chart below shows the additional internal labour required to implement the smart meter program:

	2008	2009	2010	2011	Total
Internal Labour Costs					
Capital	\$0	\$171,960	\$71,825	\$27,251	\$271,036
OM&A	\$34,888	\$36,667	\$82,500	\$68,441	\$222,496

VECC Question # 4

Reference: Procurement of Smart Meters and Installation Services, Page 4

- a) Please provide a status update on unit testing and system integration and qualification testing in preparation for cutover to live data transfer with the MDM/R and explain any variances from the project plan.
- b) Please provide a status update on Time of Use billings. Please explain any operational challenges, schedule changes and if applicable provide Thunder Bay's assessment if these issues are resolved.

Response

- a) Thunder Bay successfully cut over to production MDM/R operations effective August 4, 2011 after Unit Testing, System Integration Testing and Qualification Testing that was held during the summer months.

The extra time taken prior to the actual rollout of TOU bills in November of 2011 was to rectify some synchronization issues with Thunder Bay's CIS vendor that arose during testing.

- b) Thunder Bay successfully transitioned its customers to TOU billings beginning in November 2011. All residential customers have received at least two TOU bills and all GS < 50 kW customers have received at least four. Apart from the CIS delays mentioned in a), Thunder Bay did not experience any significant operational challenges.

VECC Question # 5

Reference: Application, Page 9

Preamble: Thunder Bay indicates that in its 2009 Cost of service application it received approval to increase its Smart Meter Funding Adder (SMFA) to \$1.97 per month per metered customer.

- a) Please provide a summary of all Board approvals for Thunder Bay's SMFA and include the OEB file number.
- b) Thunder Bay's SMFA has a sunset date of April 30, 2012. Please explain the interest charges on Sheet 8 of the smart meter model that go beyond this date.

Response

- a) Below please find a chart that provides a summary of all Board approvals for Thunder Bay's SMFA, the effective date, and the OEB file number. Please note that Thunder Bay's SMFA was embedded in its fixed distribution charges for metered customers until rates effective May 1, 2009 in EB-2008-0245 in which the SMFA was listed separately on the tariff sheet:

OEB File Number	Effective Date	SMFA/month
EB-2005-0419	May 1, 2006	\$0.27
EB-2007-0580	May 1, 2007	\$0.27
EB-2007-0880	May 1, 2008	\$0.27
EB-2008-0245	May 1, 2009	\$1.97
EB-2009-0250	May 1, 2010	\$1.97
EB-2010-0115	May 1, 2011	\$1.97

- b) Thunder Bay concurs that its SMFA has a sunset date of April 30, 2012. On Sheet 8 of the Smart Meter Model, Thunder Bay has reported its monthly revenues and interest charges on a billed basis, albeit when it actually receives the revenues from its metered customers. Since the majority of the revenues Thunder Bay receives are from its residential customers who are billed bi-monthly, Thunder Bay has forecasted to receive its remaining SMFA in June 2012.

Please note that in the revised Smart Meter Model, Thunder Bay has adjusted its June 2012 billed revenues downwards from its SMFA by approximately \$10,000 to correct for the fact that only residential customers will be billed in June as they are billed bi-monthly.

VECC Question # 6

Reference 1: Application, Page 9

Preamble: Thunder Bay proposes a uniform SMDR per metered customer based on an average number of metered customers January to November 2011.

- a) Please provide the calculation for average number of metered customers.
- b) Please provide the rationale for a uniform SMDR per metered customer given the Board's Guideline G-2011-0001 (Page 19) states, "The Board views that, where practical and where data is available, class specific SMDRs should be calculated on full cost causality."

Response

- a) In its Application, Thunder Bay utilized an arithmetic average number of metered customers January to November 2011 which included its GS > 50 kW customers as well. After reviewing PowerStream's application EB-2011-0128, Thunder Bay has revised this arithmetic average to only include its residential and GS < 50 kW customers January to December 2011 as these are the rate classes in which the SMDR and SMIRR will be applicable to. This calculation can be seen below:

Customer Class	2011												Average
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Residential	44,575	44,578	44,572	44,551	44,549	44,564	44,572	44,582	44,621	44,660	44,689	44,749	44,605
GS< 50 kW	4,437	4,442	4,442	4,448	4,443	4,452	4,459	4,456	4,463	4,468	4,483	4,485	4,457
Total	49,012	49,020	49,014	48,999	48,992	49,016	49,031	49,038	49,084	49,128	49,172	49,234	49,062

Thus, on Sheet 9 of the Smart Meter Model, Thunder Bay has revised the forecasted 2012 metered customers to be 49,062; however, the officially revised rate riders are calculated in Thunder Bay's response in #7d.

- b) In its Application, Thunder Bay's rationale for a uniform SMDA per metered customer was that it does not have its costs segregated on a rate class basis. However, upon reviewing PowerStream's application EB-2011-0128 and its methodology of allocating costs, Thunder Bay has provided a customer class specific SMDR and SMIRR rate rider in its response to Question #7.

VECC Question # 7

Reference 1: Smart Meter Model (V2_17)

Preamble: Thunder Bay completed the Smart Meter Model provided by the OEB and used the data to arrive at a proposed uniform Smart Meter Incremental Rate Rider and a proposed uniform Smart Meter Disposition Rate Rider.

Reference 2: Board Guideline G-2011-0001, Smart Meter Funding and Cost Recovery – Final Disposition, dated December 15, 2011, Page 19

Preamble: The Guideline states, "The Board views that, where practical and where data is available, class specific SMDRs should be calculated on full cost causality."

- a) Please complete a separate smart meter model by rate class.
- b) Please re-calculate the rate riders based on customer class cost information calculated in part (a).
- c) Please provide a table that summarizes the total Smart Meter Rate Adder Revenue collected by customer class.
- d) If Thunder Bay is unable to calculate the rate riders based on full cost causality, please calculate the rate riders based on the cost allocation methodology proposed in PowerStream's application EB-2011-0128.

Response

- a) Thunder Bay is unable to calculate the rate riders based on full cost causality since its costs are not segregated by rate class.
- b) Thunder Bay is unable to calculate the rate riders based on full cost causality since its costs are not segregated by rate class.
- c) Below please find a table that summarizes the total Smart Meter Rate Adder Revenue collected by customer class from May 1, 2006 to December 31, 2011:

<u>Class</u>	<u>\$</u>	<u>%</u>
Residential	3,059,081.59	90%
GS < 50 kW	310,751.65	9%
GS > 50 kW	35,624.76	1%
GS > 1000 kW	1,367.14	0%
Total	<u>3,406,825.14</u>	<u>100%</u>

- d) Since Thunder Bay is unable to calculate the rate riders based on full cost causality, Thunder Bay has calculated the rate riders on the cost methodology proposed in PowerStream's application EB-2011-0128. Shown below are the calculations.

A summary of the 2012 SMIRR Revenue Requirement from Sheet 5 of the Smart Meter Model is summarized in the table below:

Return	\$	362,546
Amortization	\$	588,074
OM&A	\$	<u>402,576</u>
Subtotal	\$	1,353,195
PILS	\$	<u>10,932</u>
Incremental Revenue Requirement for 2012	\$	<u>1,364,127</u>

Please note that Thunder Bay's interest charges from its smart meter loan are included on the Return line above.

The above revenue requirement is allocated as follows:

- The return and amortization is allocated based on the estimated capital costs for smart meters purchased by customer class (weighted average price used as the capital costs of meters installed by class is not available)
- The OM&A has been allocated based on the number of meters installed for each rate class
- PILs have been allocated based on the revenue requirement allocated to each class before PILs

	# meters installed	%	weighted average meter price	Total Meter Costs	%		
	A		B	A * B			
Residential	44,891	91%	\$86.15	\$3,867,525	66%		
GS < kW	4,594	9%	\$438.39	\$2,013,979	34%		
	<u>49,485</u>	<u>100%</u>		<u>\$5,881,504</u>	<u>100%</u>		
	Return	Amortization	OM&A	Subtotal	PILS	Total	% Total
Residential	\$238,401	\$386,702	\$365,202	\$990,305	\$8,000	\$998,305	73%
GS < kW	\$124,145	\$201,372	\$37,374	\$362,890	\$2,932	\$365,822	27%
Incremental Revenue Requirement for 2012	<u>\$362,546</u>	<u>\$588,074</u>	<u>\$402,576</u>	<u>\$1,353,195</u>	<u>\$10,932</u>	<u>\$1,364,127</u>	<u>100%</u>

The percentages calculated above were used to allocate the net deferred revenue requirement as at December 31, 2011 between the customer classes and the calculation is shown below:

Net Deferred Revenue Requirement
as at Dec. 31/11

-\$1,136,137

Residential
GS < kW

-\$831,456

73%

-\$304,681

27%

-\$1,136,137

100%

As per above, the revenue requirements have been allocated amongst the rate classes for SMDR and SMIRR. The rate riders are calculated below using the forecasted number of metered customers by rate class for 2012 as determined in Thunder Bay's response to #6a. Please note that the SMDR is to be refunded over 24 months and the SMIRR is to be collected over 12 months.

	2012 Forecasted customers	SMDR \$	SMDR	SMIRR \$	SMIRR
Residential	44,605	-\$831,456	-\$0.78	\$998,305	\$1.87
GS < kW	4,457	-\$304,681	-\$2.85	\$365,822	\$6.84
		<u>-\$1,136,137</u>	24 months	<u>\$1,364,127</u>	12 months

VECC Question # 8

Reference: Board Guideline G-2011-0001, Smart Meter Funding and Cost Recovery – Final Disposition, dated December 15, 2011, Page 19

Preamble: The Guidelines state, “The Board also expects that a distributor will provide evidence on any operational efficiencies and cost savings that result from smart meter implementation.”

- a) Please summarize Thunder Bay’s operational efficiencies and cost savings.

Response

- a) Thunder Bay has only experienced one area of cost savings to date and that is with respect to the meter readings it used to outsource. Thunder Bay realized a savings of approximately \$185,000 in 2011. Please note that Thunder Bay’s 2009 Cost of Service application had budgeted for a cost reduction of \$230,000 for 2011 and onwards to incorporate anticipated operational efficiencies.

Thunder Bay has yet to experience any additional operational efficiencies. Thunder Bay expects that the use of the Kinetiq ODS provided automations may result in the utility not needing to hire additional clerical staff for meter data processing. Thunder Bay will pursue this expectation further in its 2013 rate application.

VECC Question # 9

Reference: Board Guideline G-2011-0001, Smart Meter Funding and Cost Recovery – Final Disposition, dated December 15, 2011, Page 17

Preamble: Guideline G-2011-0001 states at page 17: “Costs for other matters such as CIS changes or TOU bill presentment may be recoverable, but the distributor will have to support these costs and will have to demonstrate how they are required for the smart meter deployment program and that they are incremental to the distributor’s normal operating costs.” Sheet 2 of the smart meter model shows \$10,000 in costs under 2.6.3 Costs for TOU rate implementation, CIS system upgrades, web presentation, integration with the MDM/R, etc.

- a) Please indicate how these costs are incremental to Thunder Bay’s normal operating costs.

Response

- a) Please see Thunder Bay’s response to Board Staff’s Interrogatory Question Response #5a and b.