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December 21, 2012

*via RESS e-filing – signed original to follow by courier*

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
PO Box 2319  
2300 Yonge Street, 27<sup>th</sup> floor  
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Toronto Hydro-Electric System Limited (“THESL”)  
OEB File No. EB-2012-0064 (the “Application”)  
Oral Hearing Undertaking Responses**

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THESL writes in respect of the above-noted matter. Please find enclosed THESL’s responses to the following undertakings from the oral hearing of phase one of the Application:

- J3.1
- J4.1 – J4.2
- J5.1 – J5.10

Please do not hesitate to contact me if you have any questions.

Yours truly,

*[original signed by]*

**Amanda Klein**

Director, Regulatory Affairs  
Toronto Hydro-Electric System Limited  
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:AK/RB

cc: Fred Cass of Aird & Berlis LLP, Counsel for THESL, by electronic mail only  
Intervenors of Record for EB-2012-0064 by electronic mail only

**TECHNICAL CONFERENCE UNDERTAKING RESPONSE  
 INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

1 **UNDERTAKING NO. J3.1:**

2 **Reference(s):**

3

- 4 a) Provide a revised version of Table 10-2 from the Kinectrics Asset Condition  
 5 Assessment report including the multi-tap criteria, and including a list of assumptions  
 6 made and other reasons for numbers used.
- 7 b) Provide a descriptor of the asset as a whole and why the asset has to be considered as  
 8 a whole. Explain why this would be a variable that THESL would tie directly to the  
 9 asset health.

10

11 **RESPONSE:**

- 12 a) Below is a table showing the comparison of Health Index distribution for Submersible  
 13 Transformers, with and without the multi-tap variable included in the Asset Condition  
 14 Assessment formulation for this asset class.

	HI Distribution				
	Very Poor	Poor	Fair	Good	Very Good
Without multi-tap criteria	0.00%	0.02%	1.33%	20.93%	77.72%
With multi-tap criteria	0.04%	20.30%	1.74%	28.19%	49.74%

15 Assumptions and numbers used to perform the HI Calculations with the inclusion of  
 16 multi-tap criteria are as follows.

- 17 1) The useful life of a multi-tap matches that of a submersible transformer since  
 18 the two components work in conjunction as a single unit.

## **TECHNICAL CONFERENCE UNDERTAKING RESPONSE INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

- 1           2) The useful life of a multi-tap is assumed to be 40 years. This is a conservative  
2           value based on the useful life of assets study (EB-2010-0142, Exhibit Q1,  
3           Tab 2, Schedule 7-2).
- 4           3) A multi-tap is considered to be in new condition if less than 10 years old, have  
5           most of its life remaining if it is 11 to 20 years old and be approaching need  
6           for replacement (end of useful life) if it is 21 to 40 years old.
- 7           4) A multi-tap is considered a de-rating factor of the health index calculation, as  
8           the multi-tap and submersible transformer work as a single unit together.
- 9           5) If the multi-tap is in new condition, there is no de-rating factor. If the multi-  
10          tap has most of its life remaining, the de-rating factor is 15%. If the multi-tap  
11          is approaching need for replacement (end of useful life), the de-rating factor is  
12          50%.
- 13
- 14   b) The asset as a whole consists of a submersible transformer and a multi-tap. These  
15    components must be considered together as a whole since a non-switchable  
16    transformer could not operate without a multi-tap. Whether the cause of an outage is  
17    the failure of the multi-tap or transformer, the outage impact and restoration  
18    procedure is virtually identical. Furthermore, if a multi-tap is near its end of useful  
19    life, then the submersible transformer would be as well. Given the costing analysis  
20    performed in response to Undertaking J3.2, the most prudent decision is to replace the  
21    transformer and eliminate the multi-tap as opposed to replacing the multi-tap and  
22    subsequently the transformer at separate times. This approach provides a significant  
23    cost reduction (24%) and hence the lowest lifecycle cost.

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 2 – ASSOCIATION OF MAJOR POWER  
CONSUMERS IN ONTARIO**

1 **UNDERTAKING NO. J4.1:**

2 **Reference(s):**

3

4 Confirm whether any of the 61 Fibertop units proposed for replacement in 2012/2013 are  
5 in locations that are also proposed for vault or vault-roof rebuilding.

6

7 **RESPONSE:**

8 In the course of responding to this undertaking, THESL has identified two Fibertop units  
9 that are proposed to be replaced which also coincide with a proposed vault rebuild  
10 project. THESL will remove these two Fibertop unit replacement jobs from the ICM  
11 segment; in their place THESL will bring forward two currently-filed Fibertop unit jobs  
12 that were originally scheduled for execution in 2014. The jobs are 4648\_A90B and  
13 4648\_A91B, both costing \$0.14M. There will be no financial impact on the 2013 ICM  
14 segment as the projects brought forward have the same cost as the ones they are  
15 replacing.

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 2 – ASSOCIATION OF MAJOR POWER  
CONSUMERS IN ONTARIO**

1 **UNDERTAKING NO. J4.2:**

2 **Reference(s):**

3

4 Confirm whether THESL has a forecast of anticipated failures in respect of the  
5 switchgear units described in B13.1 over 2012/2013. If THESL does have such a  
6 forecast, explain why it did not produce it.

7

8 **RESPONSE:**

9 THESL did not specifically forecast “anticipated failures” for the switchgear units  
10 described in Schedule B13.1. It would be impossible to produce such a forecast with  
11 enough precision to be useful for short term planning purposes. Rather, THESL has  
12 based its conclusions on the empirical evidence, models and tools described in Schedule  
13 B13.1 and throughout the application.

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 10 – SCHOOL ENERGY COALITION**

1 **UNDERTAKING NO. J5.1:**

2 **Reference(s):**

3

4 Recast the table provided by THESL in J2.1 so that the In Service Additions (“ISAs”)  
5 include 2012 CWIP. On a best-efforts basis, provide the equivalent information in  
6 respect of 2013 CWIP.

7

8 **RESPONSE:**

9 Please see attached Appendix A to this Schedule.

10

11 THESL has made its best efforts to provide the requested information in respect of 2013  
12 CWIP in the limited time available. While 2012 is largely historic, the exercise in respect  
13 of 2013 entails forecasting. While THESL believes that the information provided in  
14 respect of 2013 is directionally accurate, it is necessarily subject to refinement as further  
15 data become available.

**In-Service Summary of Capital Program**

Schedule Number	Projects	Segments	2012 Cost Estimates (\$M)					2013 Cost Estimates (\$M)					CWIP		
			2012 Forecast	2012 Additions (In-Service)	2012 Additions (Not In-Service)	Forecast 2013 In-Service for 2012 Carryforward	Forecast 2014 In-Service for 2012 Carryforward	2013 Budget	2013 Additions (In-Service)	2013 Additions (Not In-Service)	Forecast 2014 In-Service for 2013 Carryforward	2012 Additions (In-Service)	2013 Additions (In-Service)		
B1	Underground Infrastructure and Cable	Underground Infrastructure	28.75	12.74	44%	16.01	16.01	-	58.94	35.87	61%	23.07	23.07	2.88	15.06
B2		Paper Insulated Lead Covered Cable - Piece Outs and Leakers	0.08	0.04		0.05	0.05	-	5.42	3.30		2.12	2.12	-	-
B3	Handwell Replacement	13.65	6.05	7.60		7.60	-	16.65	10.13	6.52		6.52	2.57	1.30	
B4	Overhead Infrastructure and Equipment	Overhead Infrastructure	9.07	4.02		5.05	5.05	-	55.88	34.01		21.87	21.87	3.94	
B5		Box Construction	0.58	0.26		0.32	0.32	-	23.04	14.02		9.02	9.02	-	
B6		Rear Lot Construction	16.36	7.25		9.11	9.11	-	29.43	17.91		11.52	11.52	4.45	-
B7		Polymer SMD-20 Switches	-	-		-	-	-	1.53	0.93		0.60	0.60	-	-
B8		SCADA-Mate R1 Switches	-	-		-	-	-	1.43	0.87		0.56	0.56	-	-
B9		Network Vault & Roofs	2.84	1.26		1.58	1.58	-	18.76	11.42		7.34	7.34	-	-
B10		Fibertop Network Units	1.48	0.65		0.82	0.82	-	7.71	4.69		3.02	3.02	-	0.34
B11	Network Infrastructure and Equipment	Automatic Transfer Switches (ATS) & Reverse Power Breakers (RPB)	-	-		-	-	-	3.26	1.99		1.28	1.28	-	-
B12		Stations Power Transformers	0.38	0.17		0.21	0.21	-	3.48	2.12		1.36	1.36	-	-
B13.1 & 13.2	Station Infrastructure and Equipment	Stations Switchgear - Municipal and Transformer Stations	1.73	0.77	0.96	0.96	-	21.81	13.28	8.54	8.54	4.67			
B14		Stations Circuit Breakers	0.76	0.34	0.42	0.42	-	0.55	0.34	0.22	0.22	0.28			
B15		Stations Control & Communication Systems	0.14	0.06	0.08	0.08	-	1.00	0.61	0.39	0.39	-	-		
B16		Downtown Station Load Transfers	0.68	0.30	0.38	0.38	-	2.14	1.30	0.84	0.84	0.66			
B17	Bremner TS	Bremner Transformer Station	8.50	-	0%	8.50	-	8.50	81.00	-	0%	81.00	81.00	-	-
B18	Hydro One Capital Contributions	Hydro One Capital Contributions	22.98	3.69	16%	19.28	1.68	17.60	48.12	9.02	19%	39.10	39.10	-	7.72
B19	Feeder Automation	Feeder Automation	2.30	1.02	1.28	1.28	-	20.66	12.58	8.09	8.09	-	-		
B20	Metering	Metering	4.74	2.10	2.64	2.64	-	8.40	5.11	3.29	3.29	0.49	2.60		
B21	Plant Relocations	Externally-Initiated Plant Relocations and Expansions	10.16	4.50	44%	5.66	5.66	-	24.84	15.12	61%	9.72	9.72	2.47	1.29
B22	Grid Solutions	Grid Solutions	-	-	-	-	-	-	-	-	-	-	-		
BXX	Engineering Capital	ICM Understatement of Capitalized Labour	8.32	3.69	4.63	4.63	-	-	-	-	-	-	-		
C1	Operations Portfolio Capital	Operations Portfolio Capital	120.51	53.95	66.56	66.56	-	121.63	77.44	44.20	44.20	40.52	7.88		
C2	Information Technology Capital	Information Technology Capital	22.00	9.25	12.75	12.75	-	15.00	8.72	6.28	6.28	9.87	-		
C3	Fleet Capital	Fleet Capital	0.80	0.29	0.51	0.51	-	2.00	0.25	1.75	1.75	0.34	-		
C4	Buildings and Facilities Capital	Buildings and Facilities Capital	5.00	3.76	47%	1.24	1.24	-	5.00	1.65	54%	3.35	3.35	3.14	-
	Allowance for Funds Used During Construction	Allowance for Funds Used During Construction	1.20	0.15	1.05	1.05	-	1.40	1.09	0.31	0.31	-	-		
<b>Total</b>			<b>283.00</b>	<b>116.31</b>		<b>166.69</b>	<b>140.59</b>	<b>26.10</b>	<b>579.09</b>	<b>283.76</b>		<b>295.33</b>	<b>295.33</b>	<b>67.00</b>	<b>45.46</b>
<b>Percentage In-Service Additions</b>				<b>41%</b>			<b>50%</b>	<b>9%</b>		<b>49%</b>		<b>51%</b>			

	2012 Forecast	2013 Budget
Cost Estimates (\$M)	283.00	579.09
In-Service Additions	116.31	283.76
<b>Total</b>	<b>41.1%</b>	<b>49.0%</b>

Total	2012 ISA	2013 ISA	2014 ISA	2015 ISA	Total
2012 Capital Expenditure	116.31	140.59	26.10		<b>283.00</b>
2013 Capital Expenditure		283.76	295.33		<b>579.09</b>
pre-2012 CWIP	67.00	45.46		32.28	<b>177.01</b>
<b>Total</b>	<b>183.30</b>	<b>469.81</b>	<b>353.71</b>	<b>32.28</b>	<b>-</b>

**ORAL HEARING UNDERTAKING RESPONSE  
 INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J5.2:**

2 **Reference(s):**

3

4 Provide an estimate of revenue requirement offsets for the ICM years 2012 and 2013, and  
 5 explain how it is netted-out against the revenue requirement.

6

7 **RESPONSE:**

8 Recoveries have been incorporated into the following two segments:

9 1) B-21 Externally-Initiated Plant Relocations and Expansions

10 2) C-1 Operations Portfolio Capital

11

12 The recoveries have been deducted from the gross cost of each job expected to have third  
 13 party recoveries. Therefore, the \$283.0M (2012) and \$579.1M (2013) reflect the net  
 14 impact of the revenue requirement offset for the ICM years 2012 and 2013.<sup>1</sup> Details of  
 15 the recoveries can be found at the following references and are set out in the chart below:

16 1) Tab 4, Schedule B21, Table 1

17 2) Tab 8, Schedule 2-1, Table 1, and Tab 6F, Schedule 1-71, Table 2 and Table 3

	2012			2013		
	B-21 Externally-Initiated Plant Relocations and Expansions	C-1 Operations Portfolio Capital Externally-Initiated Plant Relocations	C-1 Operations Portfolio Capital Customer Connections	B-21 Externally-Initiated Plant Relocations and Expansions	C-1 Operations Portfolio Capital Externally-Initiated Plant Relocations	C-1 Operations Portfolio Capital Customer Connections
Gross Costs	11.32	1.54	42.08	30.19	5.37	49.25
Recoveries	-1.16	-0.50	-17.10	-5.35	-2.60	-11.86
<b>Net as per filed evidence</b>	<b>10.16</b>	<b>1.04</b>	<b>24.98</b>	<b>24.84</b>	<b>2.77</b>	<b>37.39</b>
Reference to evidence	Tab 8 Schedule 2-1 Table 1	Tab 6F Schedule 1-71 Table 2 = \$1.54M	Tab 4 Schedule C1 Table 4	Tab 8 Schedule 2-1 Table 1	Tab 6F Schedule 1-71 Table 3	Tab 4 Schedule C1 Table 4

<sup>1</sup> THESL has identified a discrepancy in the treatment of recoveries in C-1 Operations Portfolio Capital (Externally-Initiated Plant Relocations) for 2012. The application presents gross costs as opposed to net costs. The 2012 net cost for this category should be \$1.04M, as stated above.



## ORAL HEARING UNDERTAKING RESPONSE INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION

1 **UNDERTAKING NO. J5.3:**

2 **Reference(s):**

3

4 Update revenue requirements figures for 2012 and 2013 depicted in top three rows of  
5 Table 1, Tab 2, page 13 of the updated version of the manager's summary.

6

7 **RESPONSE:**

8 The table below reproduces the top three rows of Table 1, Tab 2, page 13, reflecting the  
9 addition of \$8.32M engineering capital in 2012. The 2013 values are unchanged.

<b>Revenue Requirements \$ Millions</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
Standard Methodology	\$ 10.86	\$ 39.87	\$ 50.73
Alternative Methodology	\$ 6.74	\$ 21.28	\$ 28.02
Difference	\$ 4.12	\$ 18.59	\$ 22.71

10 For clarity, these revenue requirements use the Board's ICM models under the Standard  
11 and Alternative approaches, and illustrate only the incremental revenue requirement of  
12 the ICM additions for each year (i.e., the 2013 revenue requirement shown only reflects  
13 the revenue requirement associated with 2013 ICM capex, and does not include the  
14 revenue requirement associated with 2012 ICM capex that would be required in 2013).

**ORAL HEARING UNDERTAKING RESPONSE  
 INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J5.4:**

2 **Reference(s):**

3

4 In respect of the table in Energy Probe interrogatory 6:

- 5 a) In the line labelled “additions”, include the latest information for 2012 and for 2013  
 6 and add a column all the way through for 2014 using in-service addition, not  
 7 including 2011 CWIP.  
 8 b) Recalculate the revenue requirement using THESL’s proxy factor as per Exhibit  
 9 K4.3.

10

11 **RESPONSE:**

12 a) and b) Please see table below:

	2011 Approved	2011 Actual	2012 Forecast	2013 Forecast	2014 Forecast	
<b>CAPEX</b>	\$ 378.8	\$ 445.5	\$ 283.0	\$ 579.1	\$ -	
<i>GROSS FIXED ASSETS</i>						
Opening Balance	\$ 4,183.6	\$ 4,179.7	\$ 4,607.8	\$ 4,724.1	\$ 5,148.4	
Additions	\$ 348.9	\$ 439.1	\$ 116.3	\$ 424.4	\$ 321.4	
Disposables	\$ -	\$ (11.1)	\$ -	\$ -	\$ -	
<b>Closing Balance</b>	<b>\$ 4,532.5</b>	<b>\$ 4,607.8</b>	<b>\$ 4,724.1</b>	<b>\$ 5,148.4</b>	<b>\$ 5,469.9</b>	
<i>ACCUMULATED DEPRECIATION</i>						
Opening Balance	\$ (2,285.7)	\$ (2,283.9)	\$ (2,424.2)	\$ (2,562.5)	\$ (2,702.7)	
Accumulated Depreciation	\$ (141.6)	\$ (148.6)	\$ (138.3)	\$ (140.2)	\$ (148.8)	
Disposals	\$ -	\$ 8.3	\$ -	\$ -	\$ -	
<b>Closing Balance</b>	<b>\$ (2,427.4)</b>	<b>\$ (2,424.2)</b>	<b>\$ (2,562.5)</b>	<b>\$ (2,702.7)</b>	<b>\$ (2,851.5)</b>	
<i>NET FIXED ASSETS OPENING BALANCE</i>	\$ 1,897.8	\$ 1,895.8	\$ 2,183.5	\$ 2,161.6	\$ 2,445.7	
<i>NET FIXED ASSETS CLOSING BALANCE</i>	\$ 2,105.1	\$ 2,183.5	\$ 2,161.6	\$ 2,445.7	\$ 2,618.3	
Average NFA	\$ 2,001.4	\$ 2,039.7	\$ 2,172.5	\$ 2,303.6	\$ 2,532.0	
Less: Net Fixed Assets funded through rates			\$ 2,015.1	\$ 2,028.8	\$ 2,042.6	
Unfunded Net Fixed Assets			\$ 157.5	\$ 274.9	\$ 489.5	
<b>10% Proxy Revenue Attraction Factor</b>			<b>\$ 15.7</b>	<b>\$ 27.5</b>	<b>\$ 48.9</b>	<b>\$ 92.2</b>
<b>2012 unfunded revenue requirement</b>			<b>\$ 15.7</b>	<b>\$ 15.7</b>	<b>\$ 15.7</b>	
<b>2013 unfunded revenue requirement</b>			<b>\$ -</b>	<b>\$ 11.7</b>	<b>\$ 11.7</b>	
<b>2014 unfunded revenue requirement</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ 21.5</b>	<b>\$ 92.2</b>

## ORAL HEARING UNDERTAKING RESPONSE INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION

1 **UNDERTAKING NO. J5.5:**

2 **Reference(s):**

3

4 Provide a version of Exhibit K4.3 with the depreciation calculation including deadband.

5

6 **RESPONSE:**

	\$ Millions	2011	2012	2013	2014	Total	Notes
2011 Approved Closing NFA		2,105.1					
2011 Approved Average NFA		<u>2,001.5</u>					[A]
2012 Opening Incremental NFA		103.7					
<b>Opening Net Fixed Assets</b>			2,105.1	2,149.1	2,476.0	-	[B] = Prior Year's Closing Net Fixed Assets
Pre-2012 CWIP			67.0	45.5	32.3	144.7	
Additions from 2012 Capital Spending			116.3	140.6	26.1	283.0	
Additions from 2013 Capital Spending			-	283.8	295.3	579.1	
Depreciation - pre-2012 Asset Base			(134.7)	(122.5)	(117.1)		
Depreciation - Pre-2012 CWIP			(1.0)	(2.7)	(3.9)		
Depreciation - 2012 and 2013 Additions			(3.6)	(17.7)	(31.7)		
			-	-	-		
<b>Closing Net Fixed Assets</b>			2,149.1	2,476.0	2,677.0		[C]
<b>Average Net Fixed Assets</b>			2,127.1	2,312.6	2,576.5		[D] = ( [B] + [C] ) / 2
<b>Less: Net Fixed Assets funded through rates</b>			2,015.1	2,028.8	2,042.6		[E] = [A] growing at 0.68% annually
<b>Unfunded Net Fixed Assets</b>			112.1	283.8	533.9		[F] = [D] - [E]
<b>Less: Deadband</b>			(27.8)	(27.8)	(27.8)		
<b>Unfunded NFA less Deadband</b>			84.3	256.0	506.2		
<b>10% Proxy Revenue Attraction Factor</b>			8.4	25.6	50.6	<b>84.6</b>	[G] = [F] x 10%
<b>2012 unfunded revenue requirement</b>			8.4	8.4	8.4		
<b>2013 unfunded revenue requirement</b>			-	17.2	17.2		
<b>2014 unfunded revenue requirement</b>			-	-	25.0	<b>84.6</b>	

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION**

- 1 The deadband amount of \$27.8M is described and shown in the Managers Summary
- 2 (Appendix 2, pages 11-12). It is the difference between the calculated threshold value
- 3 including the 20% deadband factor (\$173.0M) and excluding the 20% deadband factor
- 4 (\$145.2M).

**ORAL HEARING UNDERTAKING RESPONSE  
 INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J5.6:**

2 **Reference(s):**

3

4 On a best efforts basis, update the summary table at JT2.12 to reflect the latest evidence,  
 5 including a column reflecting the methodology set out in Exhibit K4.3.

6

7 **RESPONSE:**

8 An updated table, reflecting the additional \$8.3M of engineering capital for 2012, and  
 9 including the revenue requirement (by class) based on the methodology of Exhibit K4.3  
 10 (page 2), is presented below:

Amounts to be collected by ICM rate adders (implemented for 24 months, effective May 1, 2013)				
	Standard Approach (\$M)	Alternative Approach (\$M)	EP Alternative Approach (\$M)	K4.3 (p 2) Methodology (\$M)
Residential	43.6	37.8	24.2	36.1
Competitive Sector Multi-Unit Residential	1.6	1.4	0.9	1.3
GS<50 kW	14.3	12.4	8.0	11.8
GS 50-999 kW	33.2	28.9	18.5	27.5
GS 1000-4999 kW	10.9	9.5	6.1	9.0
LU	5.4	4.7	3.0	4.5
Streetlighting	2.5	2.2	1.4	2.1
Unmetered Scattered Load	0.8	0.7	0.4	0.6
<b>Total</b>	<b>112.3</b>	<b>97.5</b>	<b>62.4</b>	<b>93.0</b>
Assumptions				
1. Revenue calculated based on 2011 Board Approved Billing Units				

11 This table reflects the revenue requirement total over three years (2012 to 2014) related to  
 12 the proposed capital spending in 2012 and 2013, and reflecting the different  
 13 methodologies. Note that the \$112.3M shown in the first column (which is calculated

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION**

1 using the Board's ICM models) is conceptually equivalent to the methodology shown on  
2 page 1 of K4.3. The difference in the total amount (\$112.3M vs. \$114.2M in K4.3) is  
3 due to the proxy method of revenue requirement being used in the K4.3 exhibit.

4

5 The allocation of the revenue requirement to each of the rate classes in all methodologies  
6 is based on the Board's ICM models, which allocate based on 2011 approved revenue by  
7 class.

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 7 – ENERGY PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J5.7:**

2 **Reference(s):**

3

4 Update THESL's response to EP interrogatory 53 to reflect THESL's current thinking in  
5 respect of true-up process.

6

7 **RESPONSE:**

8 Further to its comments in interrogatories responses and the Addendum to the Manager's  
9 Summary, THESL contemplates that the process for working with intervenors and OEB  
10 Staff to develop the true-up mechanism would take the form of a stakeholder consultation  
11 assisted by a facilitator. Should a full agreement with respect to the true-up mechanism  
12 be reached by all participants in the process, the parties would request the OEB's  
13 approval of that agreed-upon mechanism. Should a full agreement not be reached by all  
14 participants in the process, THESL would put a proposed true-up mechanism before the  
15 OEB, with or without the support of some of the participants in the stakeholder process,  
16 supported by such evidence as may be needed for the OEB to rule on the appropriate  
17 true-up mechanism.

**TECHNICAL CONFERENCE UNDERTAKING RESPONSE  
INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

1 **UNDERTAKING NO. J5.8:**

2 **Reference(s):**

3

4 Provide an updated version of OEB Form 2-K previously filed in EB-2011-0144, updated  
5 for THESL's current expectations in respect of 2012 and its forecast for 2013.

6

7 **RESPONSE:**

8 The requested table is attached as Appendix A to this Schedule. It reflects that, in the  
9 first quarter of 2012, THESL's total workforce was reduced in order to align with the  
10 funding available to THESL. It had been THESL's plan to continue to increase its  
11 workforce as necessary to support the capital program and replace the company's ageing  
12 workforce. Appendix A reflects a continuation of THESL's current, reduced workforce.  
13 As stated in its evidence, THESL expects it will be necessary to increase staffing levels  
14 somewhat to complete the work program outlined in this application.



TABLE 1: EMPLOYEE COMPENSATION (OEB's Appendix 2-K)

	2008 Historical Actual	2009 Historical Actual	2010 Historical Actual	2011 Historical Actual	2012 Bridge	2013 Test
<b>Number of Employees (FTEs including Part-Time)</b>						
Executive	10	9	12	9	8	8
Managerial	41	43	50	53	43	48
Management/Non-Union	275	302	368	466	391	459
Union *	1220	1220	1226	1254	1059	1052
<b>Total *</b>	<b>1546</b>	<b>1574</b>	<b>1657</b>	<b>1782</b>	<b>1501</b>	<b>1566</b>
<i>* Excludes President &amp; Vice President of CUPE Local One</i>						
<b>Number of Part-Time Employees</b>						
Executive						
Management (Managerial)						
Non-Union (Management/Non-Union)						
Union						
<b>Total</b>						
<b>Total Salary and Wages</b>						
Executive	1,812,508	1,782,965	2,034,931	1,927,679	1,735,926	1,829,271
Managerial	4,960,743	5,670,025	6,890,323	7,168,325	6,005,640	6,770,021
Management/Non-Union	24,637,246	27,600,854	33,846,153	38,884,473	37,138,387	44,073,151
Union	88,723,958	91,712,517	95,057,034	96,583,191	87,663,099	91,614,955
<b>Total</b>	<b>120,134,455</b>	<b>126,766,361</b>	<b>137,828,442</b>	<b>144,563,668</b>	<b>132,543,052</b>	<b>144,287,398</b>
<b>Total Benefits</b>						
Executive	818,469	787,524	924,153	972,941	742,676	852,019
Managerial	1,690,280	1,918,365	2,448,109	2,727,764	2,416,838	2,965,559
Management/Non-Union	8,509,707	9,523,018	12,317,142	15,180,254	14,760,751	19,004,456
Union	30,960,867	31,919,115	28,949,620	38,398,376	34,532,020	38,630,694
<b>Total</b>	<b>41,979,324</b>	<b>44,148,021</b>	<b>44,639,026</b>	<b>57,279,335</b>	<b>52,452,285</b>	<b>61,452,728</b>
<b>Total Compensation (Salary, Wages, &amp; Benefits)</b>						
Executive	2,630,977	2,570,489	2,959,085	2,900,620	2,478,602	2,681,290
Managerial	6,651,023	7,588,390	9,338,433	9,896,089	8,422,478	9,735,580
Management/Non-Union	33,146,953	37,123,872	46,163,296	54,064,727	51,899,137	63,077,606
Union	119,684,825	123,631,632	124,006,655	134,981,567	122,195,119	130,245,649
<b>Total</b>	<b>162,113,778</b>	<b>170,914,383</b>	<b>182,467,468</b>	<b>201,843,003</b>	<b>184,995,336</b>	<b>205,740,126</b>
<b>Compensation - Average Yearly Base Wages</b>						
Executive	181,251	200,179	197,120	210,445	216,991	228,659
Managerial	121,783	131,760	133,152	136,073	139,666	142,527
Management/Non-Union	89,665	91,326	91,918	83,432	94,983	96,055
Union	72,700	75,169	77,508	77,004	82,779	87,086
<b>Compensation - Average Yearly Overtime</b>						
Executive	0		0	0	0	0
Managerial	0		0	0	0	0
Management/Non-Union	4,297	9,639	7,134	7,551	2,194	1,820
Union	9,498	13,121	16,111	16,338	9,907	7,942
<b>Compensation - Average Yearly Incentive Pay</b>						
Executive	70,902	85,714	73,398	99,671	74,899	82,221
Managerial	22,732	23,820	24,373	28,378	25,279	25,797
Management/Non-Union	6,769	6,729	7,010	6,459	8,280	8,348
Union**	5,063	5,806	2,828	3,928	4,381	4,159
<i>**Only includes The Society of Energy Professional, Crew Leaders, System Response Rep</i>				(132.82 FTEs for union)	(173.0 FTEs for union)	(174.50 FTE's for Union)
<b>Compensation - Average Yearly Benefits</b>						
Executive	81,847	88,418	89,521	106,216	92,834	106,502
Managerial	41,495	44,579	47,308	51,780	56,206	62,433
Management/Non-Union	30,970	31,510	33,451	32,571	37,751	41,419
Union	25,369	26,161	23,605	30,614	32,608	36,721
<b>All Inclusive (Base Wages, Overtime, Incentive Pay, Benefits)</b>						
<b>Total Compensation</b>	<b>178,510,702</b>	<b>193,838,537</b>	<b>209,915,570</b>	<b>231,793,935</b>	<b>202,026,181</b>	<b>221,369,595</b>

**ORAL HEARING UNDERTAKING RESPONSE  
INTERVENOR 3 – BUILDING OWNERS AND MANAGERS,  
GREATER TORONTO**

1 **UNDERTAKING NO. J5.9:**

2 **Reference(s):**

3

4 Identify THESL's interrogatory responses in respect of the savings that might be  
5 expected in maintenance or other types of O&M accruing from the replacement of capital  
6 equipment.

7

8 **RESPONSE:**

9 Please see THESL's responses to VECC interrogatories 27, 64, 71 and 76.

**TECHNICAL CONFERENCE UNDERTAKING RESPONSE  
INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

1 **UNDERTAKING NO. J5.10:**

2 **Reference(s):**

3

4 Provide a version of Table 2 of Exhibit K4.3 showing how one would derive the number  
5 that would be fed into the ICM formula to generate the adders (specifically, including the  
6 threshold amount including deadband of \$173M).

7

8 **RESPONSE:**

9 In order to provide a clear and consolidated reference point for the OEB and intervenors,  
10 THESL has included four tables in its response to this undertaking. As set out and  
11 described in further detail below, Tables 1 and 2 are duplicates of Exhibit K4.3, which  
12 THESL provides here for convenience of reference. In respect of Tables 3 and 4, upon  
13 review of the transcript from day 5 of the oral hearing (December 14, 2012, pages 179-  
14 185), THESL observed that there may have been some ambiguity with respect to the  
15 precise nature of the undertaking. Out of an abundance of caution, THESL has  
16 accordingly provided both Tables 3 and 4.

**TECHNICAL CONFERENCE UNDERTAKING RESPONSE  
 INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

1 **TABLE 1**  
 2 *(previously produced as page 1 of Exhibit K4.3)*

**THESL'S Proposed ICM Adders based on OEB ICM Framework**

	\$ millions	2012	2013	2014	Totals	Notes
Capital Spending		283.0	579.0		862.0	[A] Tab7 Sch2-10 pg 2of4
Less: Threshold (including 20% deadband)		173.0	173.0		346.0	[B] Tab2 App2 pg 1of1
<b>ICM Additions to Rate Base</b>		<b>110.0</b>	<b>406.0</b>		<b>516.0</b>	[C] = [A] - [B]
Approximate capital recovery factor		10%	10%			
ICM Adder for 2012 Spending		11.0	11.0	11.0	33.0	
ICM Adder for 2013 Spending			40.6	40.6	81.2	
<b>Total Revenue from ICM Adders over IRM Period</b>					<b>114.2</b>	

3 Table 1 represents an approximation that illustrates THESL’s rate adder requirements as  
 4 calculated under the OEB’s standard ICM methodology, as THESL understands it. That  
 5 is, adders based on the utility’s annual ICM capital “spend” requirements for the entire  
 6 phase 1 (2012/2013) work program, and including application of the threshold with the  
 7 deadband. THESL estimates that under this model, the cumulative adders for the phase I  
 8 ICM work program total approximately \$114.2 million.

9

10 **Notes for Table 1:**

- 11 • Based on 2012 and 2013 capital spend
- 12 • Applies threshold, including deadband, of approximately \$173M
- 13 • Results in ICM additions to rate base
- 14 • Calculates ICM adder based on 10% proxy of the additions to rate base

**TECHNICAL CONFERENCE UNDERTAKING RESPONSE  
 INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

- 1 **TABLE 2**
- 2 *(previously produced as page 2 of Exhibit K4.3)*

**THESL's Unfunded Net Fixed Assets During IRM Period**

	\$ Millions	2011	2012	2013	2014	Total	Notes
2011 Approved Closing NFA		2,105.1					Tab1 Sch2-11 pg 2of3
2011 Approved Average NFA		2,001.5					[A] Tab1 Sch2-11 pg 2of3
2012 Opening Incremental NFA		103.7					calculated
<b>Opening Net Fixed Assets</b>			2,105.1	2,149.1	2,476.0	-	[B] = Prior Year's Closing Net Fixed Assets
Pre-2012 CWIP			67.0	45.5	32.3	144.7	Tab8 Sch2-1 J2.1
Additions from 2012 Capital Spending			116.3	140.6	26.1	283.0	Tab8 Sch2-1 J2.1
Additions from 2013 Capital Spending			-	283.8	295.3	579.1	Tab8 Sch2-1 J2.1
Depreciation - pre-2012 Asset Base			(134.7)	(122.5)	(117.1)		as per THESL Asset Registry
Depreciation - Pre-2012 CWIP			(1.0)	(2.7)	(3.9)		THESL Estimate
Depreciation - 2012 and 2013 Additions			(3.6)	(17.7)	(31.7)		THESL Estimate
			-	-	-		
<b>Closing Net Fixed Assets</b>			2,149.1	2,476.0	2,677.0		[C]
<b>Average Net Fixed Assets</b>			2,127.1	2,312.6	2,576.5		[D] = ( [B] + [C] ) / 2
<b>Less: Net Fixed Assets funded through rates</b>			2,015.1	2,028.8	2,042.6		[E] = [A] growing at 0.68% annually
<b>Unfunded Net Fixed Assets</b>			112.1	283.8	533.9		[F] = [D] - [E]
<b>10% Proxy Revenue Attraction Factor</b>			11.2	28.4	53.4	<b>93.0</b>	[G] = [F] x 10%
<b>2012 unfunded revenue requirement</b>			11.2	11.2	11.2		
<b>2013 unfunded revenue requirement</b>			-	17.2	17.2		
<b>2014 unfunded revenue requirement</b>			-	-	25.0	<b>93.0</b>	

- 3 Table 2 represents the actual effect that the phase 1 (2012/2013) work program will have
- 4 on THESL's net fixed assets during the ICM term based on projected in-service additions
- 5 ("ISAs") (i.e. approximate annual and cumulative revenue consequences), assuming
- 6 approval of the entire phase 1 (2012/2013) work program, and including the impact of
- 7 2011 year-end. This table was prepared because THESL wanted to better understand
- 8 how its projected net fixed assets would change over the IRM period (for the phase 1

## TECHNICAL CONFERENCE UNDERTAKING RESPONSE INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF

1 work program) given the difference between capital spending versus in-service additions.  
2 This table reflects the fact that some assets for the phase 1 work program will come into  
3 service in 2014. THESL estimates that under this model, the total cumulative ICM adder  
4 would be approximately \$93 million.

5

### 6 **Notes for Table 2:**

- 7 • Based on 2011 Approved Closing Net Fixed Assets (NFA) of \$2105.1M
- 8 • Considers ISAs for the 2012 and 2013 capital spend streams
- 9 • Includes ISA of Construction Work in Progress (CWIP) for jobs pre-2012 ISA for  
10 pre-2012 CWIP, 2012 and 2013 capital spend carryforward through to 2014
- 11 • Deducts associated depreciation for the ISA for the respective years
- 12 • Average NFA is calculated based on prior year closing and calculated NFA as per  
13 above
- 14 • Recognizes the 2011 year-end balance of NFA relative to the 2011 average NFA  
15 underpinning 2011 base distribution rates (i.e., the “2011 half-year rule”)
- 16 • Deduct funded NFA - based on 2011 Approved Average NFA escalated by  
17 growth factor of 0.68%
- 18 • Results in an unfunded average NFA
- 19 • Calculates ICM adder based on 10% proxy of the unfunded average NFA

## TECHNICAL CONFERENCE UNDERTAKING RESPONSE INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF

1 **TABLE 3**

\$ Millions	2012	2013	2014	Total	Notes
2012 Opening Incremental NFA	103.7			103.7	[A] = 2011 Year-End NFA that is not recognized in rates
Pre-2012 CWIP	67.0	45.5	32.3	144.7	[B]
Additions from 2012 Capital Spending	116.3	140.6	26.1	283.0	[C]
Additions from 2013 Capital Spending	0.0	283.8	295.3	579.1	[D]
<b>Total ISAs</b>	<b>287.0</b>	<b>469.8</b>	<b>353.7</b>	<b>1,110.5</b>	[E] = [A] + [B] + [C] + [D]
Less: Threshold including Deadband	173.0	173.0	173.0		[F]
Incremental ISAs above Threshold	114.0	296.8	180.7		[G] = [E] - [F]
Application of Half-Year Rule	100%	100%	50%		[H] 2014 ISAs subject to HYR in year prior to 2015 rebasing per ICM Framework
<b>ICM ISAs</b>	<b>114.0</b>	<b>296.8</b>	<b>90.4</b>		[I] = [G] X [H]
Approximate capital recovery factor	10%	10%	10%		
	11.4	11.4	11.4	34.2	
ICM Adder for 2013 ISAs		29.7	29.7	59.4	
ICM Adder for 2014 ISAs			9.0	9.0	
<b>Total Revenue from ICM Adders over IRM Period</b>				<b>102.6</b>	

2 Table 3 is essentially Table 1, replacing CAPEX “spend” amounts with ISAs in respect  
 3 of the phase 1 (2012/2013) work program. This table is premised on 2012 opening  
 4 incremental net fixed assets that reflect THESL’s claim with respect to the 2011 half-year  
 5 rule (i.e. \$103.7 million). THESL estimates that under this model, the total revenue  
 6 requirement is approximately \$102.6 million.

7  
 8 **Notes for Table 3:**

- 9 • Based on opening incremental NFA of \$103.5M (difference between the 2011  
 10 approved average NFA and 2011 approved closing NFA)

## **TECHNICAL CONFERENCE UNDERTAKING RESPONSE INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

- 1       • Considers In-Service Additions (ISA) for the 2012 and 2013 capital spend  
2       streams
- 3       • Includes ISA of Construction Work in Progress (CWIP) for jobs pre-2012
- 4       • ISA for pre-2012 CWIP, 2012 and 2013 capital spend carryforward through to  
5       2014
- 6       • Applies threshold, including deadband, of \$173M
- 7       • Calculates ICM adder based on 10% proxy of the incremental ISA above the  
8       threshold



## TECHNICAL CONFERENCE UNDERTAKING RESPONSE INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF

1 **TABLE 4**

	\$ Millions	2011	2012	2013	2014	Total	Notes
2011 Approved Closing NFA		2,105.1					
2011 Approved Average NFA		<u>2,001.5</u>					[A]
2012 Opening Incremental NFA		103.7					
<b>Opening Net Fixed Assets</b>			2,105.1	2,149.1	2,476.0	-	[B] = Prior Year's Closing Net Fixed Assets
Pre-2012 CWIP			67.0	45.5	32.3	144.7	
Additions from 2012 Capital Spending			116.3	140.6	26.1	283.0	
Additions from 2013 Capital Spending			-	283.8	295.3	579.1	
Depreciation - pre-2012 Asset Base			(134.7)	(122.5)	(117.1)		
Depreciation - Pre-2012 CWIP			(1.0)	(2.7)	(3.9)		
Depreciation - 2012 and 2013 Additions			(3.6)	(17.7)	(31.7)		
			-	-	-		
<b>Closing Net Fixed Assets</b>			2,149.1	2,476.0	2,677.0		[C]
<b>Average Net Fixed Assets</b>			2,127.1	2,312.6	2,576.5		[D] = ( [B] + [C] ) / 2
<b>Less: Net Fixed Assets funded through rates</b>			2,015.1	2,028.8	2,042.6		[E] = [A] growing at 0.68% annually
<b>Unfunded Net Fixed Assets</b>			112.1	283.8	533.9		[F] = [D] - [E]
<b>Less: Deadband</b>			(27.8)	(27.8)	(27.8)		
<b>Unfunded NFA less Deadband</b>			84.3	256.0	506.2		
<b>10% Proxy Revenue Attraction Factor</b>			8.4	25.6	50.6	<b>84.6</b>	[G] = [F] x 10%
<b>2012 unfunded revenue requirement</b>			8.4	8.4	8.4		
<b>2013 unfunded revenue requirement</b>			-	17.2	17.2		
<b>2014 unfunded revenue requirement</b>			-	-	25.0	<b>84.6</b>	

- 2 Table 4 is essentially Table 2, adjusted to apply the standard ICM threshold amount (i.e.  
 3 the deadband in addition to depreciation). THESL estimates that under this model, the  
 4 adders for the phase I (2012/2013) work program total approximately \$84 million. This  
 5 table also appears in THESL's response to undertaking J5.5.

## **TECHNICAL CONFERENCE UNDERTAKING RESPONSE INTERVENOR 1 – ONTARIO ENERGY BOARD STAFF**

1 **Notes for Table 4:**

- 2       • The deadband amount of 27.8M, is described and shown in the Managers  
3       Summary on pp 11-12 and in Appendix 2. It is the difference between the  
4       calculated threshold value including the 20% deadband factor (\$173.0M) and  
5       excluding the 20% deadband factor (\$145.2M).