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November 16, 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”)  
Updated Interrogatory Responses**

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We write in respect of the above-noted matter. Please find enclosed revisions THESL’s interrogatory responses originally filed on October 5, 2012. These updates are consequential to THESL’s evidentiary update filed on October 31, 2012.

The following interrogatory responses have been updated:

Issue No.	Revised Interrogatory Responses
Issue 1.2	CUPE 5 a
Issue 2.2	OEB Staff 29 OEB Staff 32 a,b OEB Staff 36 a OEB Staff 37 a,b OEB Staff 38 f OEB Staff 62 a,c OEB Staff 73 a AMPCO 30 a AMPCO 31 PP 3 SEC 17 VECC 55
Issue 4.2	CCC 24

In addition, THESL encloses a revised Appendix 1 to the Manager's Summary (Tab 2 of THESL's pre-filed evidence). This revision is limited to a formatting adjustment; the substance of the document is identical to the version filed on October 31, 2012.

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

**APPENDIX 1 TO MANAGER'S SUMMARY**

(\$ millions)

CapEx Approved 2011		378.8		
Funded through Depreciation		-138.8		
Fixed Assets Impact		240.0		
Closing Rate Base in 2011		120.0		
Opening Rate Base in 2012		120.0		
<b>Rate Base</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>Total</b>
Opening Rate Base	120.0	116.3	112.5	
Depreciation for the year	-3.8	-3.8	-3.8	
Closing Balance	116.3	112.5	108.8	
Average Balance	118.1	114.4	110.6	
<b>Revenue Requirement</b>				
Depreciation	3.8	3.8	3.8	11.3
Cost of capital (6.94%)				
Interest (5.18% x 60%)	3.7	3.6	3.4	10.7
Return on Equity (9.58% x 40%)	4.5	4.4	4.2	13.1
PILs	1.0	1.0	0.9	3.0
<b>Total Revenue Requirement</b>	<b>13.0</b>	<b>12.7</b>	<b>12.4</b>	<b>38.0</b>
<b>PILs Calculation</b>				
Target Net Income	4.5	4.4	4.2	13.1
Add: Depreciation	3.8	3.8	3.8	11.3
Less: CCA	-5.4	-5.4	-5.4	-16.1
Income for PILs purposes	2.9	2.8	2.6	8.3
PILs	0.8	0.7	0.7	2.2
Gross-up PILs	1.0	1.0	0.9	3.0
<b>Assumptions</b>				
Depreciation vs CCA ratio	1.43	1.43	1.43	
Average life of Assets	32 years	32 years	32 years	
Tax rate	26.40%	26.40%	26.40%	

## RESPONSES TO CANADIAN UNION OF PUBLIC EMPLOYEES, LOCAL ONE INTERROGATORIES ON ISSUE 1.2

1 **INTERROGATORY 5:**

2 **Reference(s):**           **Section C / Schedule C2 – 2011 Carryover Projects, Pages 4**  
3                                   **and 5**  
4

5 **a) Please provide the detail for how much of the 2011 Carryover projects value for**  
6 **2012 is associated with Customer Care and Service Area Enhancements.**  
7

8 **RESPONSE:**

9 a) Of the 2011 carryover amount \$6,070,000 is associated with Customer Care and  
10 Service Area Enhancements. Please see the table below.

/U

Project	2011 Carryover Amount (\$M)	Description
CUSTOMER SELF SERVICE	\$3.27	Projects to meet the growing needs and expectations of tech savvy customers and improve online presence. THESL is enhancing customer experience via online self serve features (such as customer profile creation/ change/deletion and access to time of use rate information).
REGULATORY REQUIREMENTS	\$2.80	The project also implements solutions to address changing regulatory requirements mainly the use of 'register' data instead of 'interval' data for time-of-use billing and suite meter automated reading.
<b>TOTAL</b>	<b>\$6.07</b>	

/U

**RESPONSES TO CANADIAN UNION OF PUBLIC EMPLOYEES,  
LOCAL ONE INTERROGATORIES ON ISSUE 1.2**

- 1   **b) Please provide specific details of the costs within that above-referenced total.**  
2       **Please identify if any of those projects include self-service enhancements to the**  
3       **call centre telephone system.**

4

5   **RESPONSE:**

- 6   b) None of the 2011 carryover projects include self-service enhancements to the call  
7       centre telephone system.

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1 **INTERROGATORY 29:**

2 **Reference(s):** T4/S B1/pp. 2-3/Table 1

3

4 Please recast Table 1, in an MS-Excel format (with formulas) to be structured as shown  
5 below, by adding the requested information in the additional column for each of the jobs  
6 shown in the referenced Table:

Job #	Job Title	Year  Original In-Service	Year(s) for Work Job Completion	Estimated Cost	No. of Submersible Transformers	Cable Length Km	Historical Reliability Performance 2009		Historical Reliability Performance 2010		Historical Reliability Performance 2011	
							CI	CHI	CI	CHI	CI	CHI

7 **RESPONSE:**

8 Table 1, in the attached Appendix A, provides the requested information. However, the  
9 “Year Original In-Service” information is not available. Furthermore, as explained in  
10 response to AMPCO interrogatory 10 (b) (Tab 6F, Schedule 2-10, part b), a feeder  
11 consists of hundreds, if not thousands, of components of different vintages.

Job #	Job Title	Year(s) for Work Job Completion	Estimated Cost (\$M)	Number of Submersible Transformers	Cable Length (Km)	Historical Reliability Performance 2009		Historical Reliability Performance 2010		Historical Reliability Performance 2011	
						CI	CHI	CI	CHI	CI	CHI
1	Underground Rehabilitation of Feeder NY80M29	2012, 2013	\$2.90	12	16.1	10473	3704.4	2430	1631.4	8255	2294.1
2	Underground Rehabilitation of Feeder SCNAR26M34	2012, 2013, <del>2014</del>	\$2.23	18	8.25	1183	7220.9	9101	5567.4	7560	14615.7
3	Underground Rehabilitation of Feeder NY55M8	2013	\$2.50	31	7.5	15626	6944.5	6227	3920.1	10734	8972.8
4	Underground Rehabilitation of Feeder YK35M10	2012	\$2.32	0	3.5	12687	4099.1	3289	548.4	17593	2332.9
5	<del>Underground Rehabilitation of Feeder SCNT63M4</del>	<del>2014</del>	<del>\$3.16</del>	<del>4</del>	<del>13.75</del>	<del>397</del>	<del>131.1</del>	<del>230</del>	<del>648.8</del>	<del>28124</del>	<del>22101.8</del>
6	Underground Rehabilitation of Feeder SCNA47M14	2012, 2013	\$4.43	37	6.5	4076	3364.7	14227	7657.6	11491	7586.0
7	Underground Rehabilitation of Feeder NY51M6	2012	\$2.91	0	13.3	7099	6992.4	5131	2937.5	5408	8757.6
8	<del>Underground Rehabilitation of Feeder NY80M8</del>	<del>2014</del>	<del>\$9.51</del>	<del>18</del>	<del>11</del>	<del>4622</del>	<del>5143.6</del>	<del>4616</del>	<del>3768.3</del>	<del>3004</del>	<del>2975.2</del>
9	<del>Underground Rehabilitation of Feeder NY85M6</del>	<del>2014</del>	<del>\$2.01</del>	<del>4</del>	<del>7.4</del>	<del>576</del>	<del>38.4</del>	<del>1831</del>	<del>782.2</del>	<del>5833</del>	<del>12279.2</del>
10	Underground Rehabilitation of Feeder NY51M8	2013, <del>2014</del>	\$1.26	0	4	6124	2786.9	2277	2634.0	2480	460.9
11	Underground Rehabilitation of Feeder SCNA502M22	2012, 2013, <del>2014</del>	\$2.78	28	10.69	19233	11978.6	7957	4184.7	20126	7458.2
12	Underground Rehabilitation of Feeder SCNAH9M30	2012, <del>2014</del>	\$0.84	25	4.45	8147	8174.7	6796	9441.2	2461	3238.7
13	Underground Rehabilitation of Feeder NY85M4	2013, <del>2014</del>	\$2.48	30	14.5	524	129.1	26	84.1	2862	6235.2
14	Underground Rehabilitation of Feeder SCNA47M13	2012, <del>2014</del>	\$3.47	63	11.6	4889	2652.9	10328	11820.5	17600	12499.5
15	Underground Rehabilitation of Feeder NY80M2	2012	\$0.80	0	5.1	2050	394.5	7966	5441.0	2809	1354.4
16	Underground Rehabilitation of Feeder NY51M7	2013	\$1.13	1	4	5466	1782.7	9764	3676.3	3126	1728.4
17	Underground Rehabilitation of Feeder NY51M24	2013, <del>2014</del>	\$3.21	22	20.04	4337	3518.4	6265	5409.8	270	942.0
18	Underground Rehabilitation of Feeder NY80M30	2012	\$4.07	30	40.3	7419	5809.5	9370	4961.8	442	255.7
19	<del>Underground Rehabilitation of Feeder NY55M23</del>	<del>2014</del>	<del>\$2.24</del>	<del>3</del>	<del>1.575</del>	<del>115</del>	<del>455.1</del>	<del>6533</del>	<del>1367.2</del>	<del>3170</del>	<del>914.9</del>
20	<del>Underground Rehabilitation of Feeder NY85M24</del>	<del>2014</del>	<del>\$2.03</del>	<del>0</del>	<del>14.1</del>	<del>2726</del>	<del>1321.5</del>	<del>62</del>	<del>52.1</del>	<del>4793</del>	<del>3023.6</del>
21	Underground Rehabilitation of Feeder SCNAE5-2M3	2012	\$1.51	0	6	174	447.6	297	1376.3	2374	757.7
22	<del>Underground Rehabilitation of Feeder NY85M7</del>	<del>2014</del>	<del>\$13.83</del>	<del>41</del>	<del>8.58</del>	<del>1228</del>	<del>1415.1</del>	<del>3414</del>	<del>772.7</del>	<del>85</del>	<del>35.8</del>
23	Underground Rehabilitation of Feeder SCNT63M12	2012, 2013, <del>2014</del>	\$7.68	121	64.529	4968	6925.4	1459	5414.3	18772	31571.0
24	Underground Rehabilitation of Feeder SCNT63M8	2012, 2013, <del>2014</del>	\$5.05	58	24.002	11495	5276.3	227	658.5	5313	5879.2
25	Underground Rehabilitation of Feeder SCNAE5-1M29	2012	\$3.97	30	19.6	1934	3827.0	8032	4101.2	2676	1952.3
26	Underground Rehabilitation of Feeder NY53M25	2013	\$2.40	0	13.6	19054	10647.6	563	1167.2	1393	919.9
27	<del>Underground Rehabilitation of Feeder NY80M9</del>	<del>2014</del>	<del>\$2.21</del>	<del>3</del>	<del>16.25</del>	<del>3666</del>	<del>1662.2</del>	<del>141</del>	<del>422.6</del>	<del>927</del>	<del>816.7</del>
28	Underground Rehabilitation of Feeder SCNT47M3	2012, 2013, <del>2014</del>	\$16.98	13	66.45	47262	21607.5	102883	45728.6	12750	8963.5
29	<del>Underground Rehabilitation of Feeder SCNAH9M23</del>	<del>2014</del>	<del>\$2.71</del>	<del>0</del>	<del>12.3</del>	<del>1963</del>	<del>432.5</del>	<del>1163</del>	<del>134.8</del>	<del>10042</del>	<del>7207.5</del>
30	Underground Rehabilitation of Feeder NY51M3	2012, 2013, <del>2014</del>	\$0.37	54	8.9	150	454.2	4500	1420.2	1638	3012.8
31	Underground Rehabilitation of Feeder SCNA47M17	2012	\$1.10	1	16.6	7260	1916.2	7740	3305.4	3303	665.4
32	Underground Rehabilitation of Feeder NY85M31	2013	\$0.34	0	3.9	1	2.7	12	23.2	517	58.3
33	<del>Underground Rehabilitation of Feeder SCNA502M21</del>	<del>2014</del>	<del>\$2.56</del>	<del>0</del>	<del>16.742</del>	<del>7099</del>	<del>941.1</del>	<del>4814</del>	<del>1534</del>	<del>8992</del>	<del>6298.1</del>
34	Underground Rehabilitation of Feeder SCNT47M1	2012, 2013, <del>2014</del>	\$6.63	16	58.68	6436	3492.6	11039	7162.5	2151	142.6
35	Underground Rehabilitation of Feeder NY55M21	2013	\$1.51	3	7.5	844	752.9	1254	716.2	189	380.7
36	Underground Rehabilitation of Feeders NY85M1, NY85M9 and NYSS58F1	2012, 2013	\$2.66	3	4.38	2191	1825.2	3359	3380.0	10731	6601.7

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

1 **INTERROGATORY 32:**

2 **Reference(s):** T4/S B1/pp. 2-3/Table 1 and T4/S B1/p. 111/l 22 - 27

3

4 In the second reference it is stated that prior to 1990, XLPE cable manufacturing  
5 processes did not have sufficiently strict quality controls to keep out impurities from the  
6 insulation system and provide reliable sealing of the insulation system to prevent  
7 moisture ingress. It is also indicated that due to these defects, early vintage XLPE cables  
8 are more prone to water treeing and high rates of premature failure than newer generation  
9 XLPE cables.

10

11 **a) Please indicate which of the 34 Jobs listed in the first reference has cables**  
12 **installed prior to 1990, and are thus from the early vintage XLPE cables that**  
13 **were prone to premature failures.**

14

15 **RESPONSE:**

16 a) Of the 36 jobs, 31 jobs replace XLPE direct buried cable that was installed prior to  
17 1990. These jobs have been identified in Table 1 below.

/U



## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1 **RESPONSE:**

2 **Table 1: Jobs with direct buried cable that was installed prior to 1990**

Job Title
Underground Rehabilitation of Feeder NY80M29
Underground Rehabilitation of Feeder SCNAR26M34
Underground Rehabilitation of Feeder NY55M8
Underground Rehabilitation of Feeder SCNT63M4
Underground Rehabilitation of Feeder SCNA47M14
Underground Rehabilitation of Feeder NY51M6
Underground Rehabilitation of Feeder NY80M8
Underground Rehabilitation of Feeder NY85M6
Underground Rehabilitation of Feeder NY51M8
Underground Rehabilitation of Feeder SCNA502M22
Underground Rehabilitation of Feeder SCNAH9M30
Underground Rehabilitation of Feeder NY85M4
Underground Rehabilitation of Feeder SCNA47M13
Underground Rehabilitation of Feeder NY80M2
Underground Rehabilitation of Feeder NY51M24
Underground Rehabilitation of Feeder NY80M30
Underground Rehabilitation of Feeder NY85M24
Underground Rehabilitation of Feeder SCNAE5-2M3
Underground Rehabilitation of Feeder NY85M7
Underground Rehabilitation of Feeder SCNT63M12
Underground Rehabilitation of Feeder SCNT63M8
Underground Rehabilitation of Feeder SCNAE5-1M29
Underground Rehabilitation of Feeder NY53M25
Underground Rehabilitation of Feeder SCNT47M3

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

Job Title
Underground Rehabilitation of Feeder SCNAH9M23
Underground Rehabilitation of Feeder SCNA47M17
Underground Rehabilitation of Feeder NY85M31
Underground Rehabilitation of Feeder SCNA502M21
Underground Rehabilitation of Feeder SCNT47M1
Underground Rehabilitation of Feeder NY55M21
Underground Rehabilitation of Feeders NY85M1, NY85M9 and NYSS58F1

/U

/U

- 1    **b) Of the Jobs identified in response to Question a) above, please identify all jobs**  
2        **where one or more portions of the original early vintage XLPE cables was**  
3        **replaced with newer tree-retardant XLPE cable (TR-XLPE), and for each such**  
4        **job, the year during which such replacements occurred.**

5

6    **RESPONSE:**

- 7    b) Out of the 31 jobs identified in part (a) above, eight have portions of direct buried  
8        TR-XLPE cables that were installed after 1990. These jobs are listed in Table 2  
9        below.

/U

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1 **Table 2: Jobs replacing TR-XLPE cable**

Job Title	Year of XLPE Replacement with TR-XLPE
Underground Rehabilitation of Feeder SCNA502M22	1998
Underground Rehabilitation of Feeder NY51M7	2006
Underground Rehabilitation of Feeder SCNT63M12	1998
Underground Rehabilitation of Feeder SCNT63M8	2011
Underground Rehabilitation of Feeder SCNT47M3	1991, 1993, 2010
Underground Rehabilitation of Feeder NY51M3	1993
Underground Rehabilitation of Feeder SCNA502M21	1998
Underground Rehabilitation of Feeder NY55M21	2001

/U

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

1 **INTERROGATORY 36:**

2 **Reference(s): T4/S B2/p. 1, p. 10, p. 15, p. 19, p. 26**

3

4 At page 1 of the reference, it is indicated that THESL has approximately 1,305 kilometers  
5 of PILC cables;

6

7 The two tables, Table 2 at page 10 and Table 3 at page 15, of the reference do not include  
8 the length of cables that will be replaced.

9

10 At page 19 of the reference it is stated that “Currently there are 91 identified cable  
11 chambers that are severely congested...”

12

13 At page 26 of the reference it is stated that “In 2011, there were 28,576 cable chambers  
14 and vaults entered by THESL workers”.

15

16 **a) Please provide a recast of both Tables 2 and Table 3, noted above, adding in**  
17 **each the length of cable for each “Job” in kilometre which is proposed for**  
18 **replacement.**

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1 **RESPONSE:**

2 a)

3

4 **Table 2: Required Capital Costs**

Job Estimate Number	Job Title	Job Year	Kilometres of PILC Replaced	Total Estimated Cost (\$M)
27177	Bridgman to High Level PILC Feeder Replacement—Phase 1—Civil	2013	0km	3.9

/U

5 **Table 3: Piece Out and Leaker Jobs**

Job Estimate Number	Job Title	Units	Job Year	Kilometres of PILC Replaced	Total Cost (\$M)
21216	Carlaw Station Piece Out and Leakers	24	2013	3.768 km	0.51
21217	Leaside Station Piece Out and Leakers	21	2013	3.297 km	0.18
21218	Esplanade Station Piece Out and Leakers	12	2013	1.884 km	0.11
21219	Glengrove Station Piece Out and Leakers	15	2012	2.355 km	0.29
21220	Cecil Station Piece Out and Leakers	17	2012	2.669 km	0.20
21221	Duplex Station Piece Out and Leakers	41	2012	6.437 km	0.61

/U

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

Job Estimate Number	Job Title	Units	Job Year	Kilometres of PILC Replaced	Total Cost (\$M)
21222	Main Station Piece Out and Leakers	31	2012	4.867 km	0.58
19798	Windsor Station Piece Out and Leakers II	8	2013	1.256 km	2.24
19554	Terauley Station Piece Out and Leakers	49	2012	7.693 km	0.76
24688	Bridgman Station Piece Out and Leakers	17	2014	2.669 km	0.17
24703	Gerrard Station Piece Out and Leakers	12	2014	1.884 km	0.10
24706	Basin Station Piece Out and Leakers	3	2014	0.471 km	0.05
24711	4kV Stations Piece Out and Leakers	103	2014	16.171 km	1.15
2012-2013 Total					5.5

/U

/U

**RESPONSES TO ONTARIO ENERGY BOARD STAFF  
INTERROGATORIES ON ISSUE 2.2**

1   **b) Please provide the total number of Chambers and total number of Vaults that**  
2       **THESL has on its system that have PILC cables.**

3

4   **RESPONSE:**

5   b) There are 5,081 cable chambers containing PILC cable, and 1,710 vaults (both  
6       customer-owned and THESL-owned) that contain PILC cable.

7

8   **c) Please state whether or not THESL has a plan for replacement of the total 1,305**  
9       **kilometres of PILC cables? If yes, please provide a copy of such a plan outlining**  
10      **the amount of cables to be replaced each of the years in that plan.**

11

12   **RESPONSE:**

13   c) THESL has no plan at this time for the replacement of all the 1,305 km of PILC  
14       cable.

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

### **INTERROGATORY 37:**

**Reference(s): T4/S B 3/pp. 1 – 14**

At the reference, on page 1, lines 14 – 28, it is indicated that:

- of the approximately 11,700 handwells on the THESL system, by 2011, 5,600 existing units were replaced by new non-conducting units;
- these 5,600 units were concentrated in the downtown core because that is where both the number of handwells and the potential exposure to contact voltage are greatest;
- for the remaining handwells (4,900 units, as stated on page 13), THESL will target for replacement first the downtown core, and then North York, East York, Etobicoke, and Scarborough.

On pages 9 – 10, Figures 6 & 7 indicate that there have been marked improvements since 2009 in terms of “Historical Contact Voltage Hits identified by Mobile Surveying” (Figure 6), and “Average Level of Contact Voltage Detected” (Figure 7).

On pages 11 – 12, Tables 1 and 2 indicate marked reduction in the “Number of Energized Handwells” (Table 1) and that the “Contact Voltage Incidents on Handwells (2011)” (Table 2) were within the priority area targeted by THESL for handwell replacement before it replaces handwells in North York, East York, Etobicoke, and Scarborough.

**a) Please provide the number of handwells and the cost for units that still need replacement located in the downtown core.**



## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1   **RESPONSE:**

2   a) The number of handwells that remain to be replaced in the downtown core is 2587.

3       The estimated cost to replace these handwells is \$15,851,238

4

5   **b) Please provide a recast of Table 3 on page 14 assuming THESL's**  
6       **implementation of the handwell replacement and their costs is spread over a**  
7       **longer period of six years (2012 – 2017), instead of three years. In providing this**  
8       **recast, the number and cost of handwells in 2012 and 2013 should include those**  
9       **identified in the response to part a) above.**

10

11   **RESPONSE:**

12   b) The following table is a recast of Table 3 assuming an implementation of the  
13       handwell replacement from 2012-2017.

Project Title	Project Year	Cost Estimate
Handwell Standardization & Remediation	2012	\$15,851,238
Handwell Standardization & Remediation	2013	\$11,536,662
Handwell Standardization & Remediation	2014	\$2,884,166
Handwell Standardization & Remediation	2015	\$2,867,912
Handwell Standardization & Remediation	2016	\$2,007,538
Handwell Standardization & Remediation	2017	\$2,294,330
	<b>Total:</b>	<b>\$37,441,846</b>

**RESPONSES TO ONTARIO ENERGY BOARD STAFF  
INTERROGATORIES ON ISSUE 2.2**

1    **c) Please state how the experience gained from the early phases of the handwell**  
2       **Replacement program has been incorporated into the current (and future)**  
3       **programs.**

4

5    **RESPONSE:**

6    c) Some of the experiences gained in the early phases include: developing the contract  
7       management relationship between THESL and construction contractors, working with  
8       City of Toronto permit staff to determine how best to issue permits for handwell  
9       replacements (such as by individual handwell versus by street), increasing the pace of  
10      construction during the second and subsequent years of construction, informing  
11      stakeholders such as the Electrical Safety Authority or other utilities of the program  
12      through discussions and presentations at industry meetings, and creating and  
13      enhancing the new materials, Construction Standards, Standard Practices and  
14      Standard Design Practices described on page 9, lines 10-19.

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

### **INTERROGATORY 38:**

**Reference(s):** **T 4/S B 4 and Kinectrics Inc. Report *Toronto Hydro-Electric System Limited 2012 Asset Condition Assessment Audit, May 7, 2012***

At the first reference at page 40 it is indicated that there are approximately 2,200 Completely Self-Protected (CSP) Transformers, and on page 42, that THESL plans to replace 35 CSP transformers with standard non-CSP transformers as part of conversion and rehabilitation work from 2012 to 2014. The same page also appears to suggest that THESL intends to replace all 2,200 CSP transformers between 2012 and 2014.

At page 58 of the first reference in regard to “Porcelain Overhead Switches”, it is indicated that there are 8,774 manual in-line switch locations, 7,442 porcelain SMD-20 switch locations, and 1,200 manual ganged switch locations. At page 67 it is indicated that of the 8,774 in-line disconnect switches, 1,629 are over 50 years old, and 25 are over 60 years old – both categories need to be changed urgently and the units over 60 years old need to be replaced in 2012. On page 77, Option (a), is to replace in-line disconnect and manual air-break gang-operated switches in 238 locations in 2012, 547 in 2013 and 114 in 2014. On page 81, THESL is proposing to replace 400 porcelain insulators yearly in each of 2012, 2013, and 2014.

At the second reference in regard to “Section 16 Three Phase Overhead Gang (Rem.) Switches “, in Table 16-1, for a population of 263 and a sample size of about 52%, it is reported in Table 16-2 that the switches conditions approximately are 30% “Very Good” condition, 63% in “Good” condition and 7% in “Fair” condition.

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

At the second reference in regard to “Section 17 Three Phase Overhead Gang (Man.) Switches “, in Table 17-1, for a population of 1069 and a sample size of about 6%, it is reported in Table 17-2 that the switches conditions approximately are 39% “Very Good” condition, 56% in “Good” condition and 5% in “Fair” condition.

**a) Please provide the cost (labour and equipment) of installing a standard transformer for each CSP transformer replaced.**

### **RESPONSE:**

a) The unit cost of installing a non-CSP transformer on the 27.6 kV system (including the necessary 45-foot cedar pole and all associated equipment) is approximately \$7,150 for materials and \$12,450 for labour, which totals \$19,600.

**b) Please explain why THESL cannot modify the CSP design by simply having an external fuse installed outside of each CSP transformer, and solid connect the terminals inside to bypass the internal fuse. Please comment on the view that the proposed modification can be implemented on units that are still in good condition regardless of age, in order to effect savings.**

### **RESPONSE:**

b) THESL does not refurbish or modify transformers using in-house resources. The manufacturer does not recommend a retrofit of CSP transformer units in the proposed manner. If the suggested alteration were to be pursued, any modification of internal parts should be done in a controlled environment by qualified transformer technicians

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

1 and not on the field. However, the estimated cost of shipping a CSP transformer for  
2 modification is greater than a non-CSP transformer itself.

3

4 Furthermore, CSP transformers are on shorter poles than those required to provide  
5 adequate clearance between an external switch with the cut out fuse and the top of the  
6 transformer bushing. The proposed modification thus would require a new, larger  
7 pole to accommodate the external cut out fuse, which represents a substantial portion  
8 of the cost of installing non-CSP transformers. As a result, although it is technically  
9 viable, the estimated costs of modifying a CSP transformer in the manner suggested  
10 are greater than installing a new standard transformer, which has the additional  
11 benefit of an extended life span.

12

13 **c) It is understood that THESL uses three” Single-Phase Switches” to form Three**  
14 **Phase Overhead Gang Switches. Please indicate how many of the 8,774 in-line**  
15 **disconnect switches reported at the first reference, are installed as single phase**  
16 **switches installed on laterals.**

17

### **RESPONSE:**

18  
19 c) Of the 8,774 in-line disconnect switches reported at the first reference, 6,625 are  
20 installed as single-phase switches installed on laterals.

21

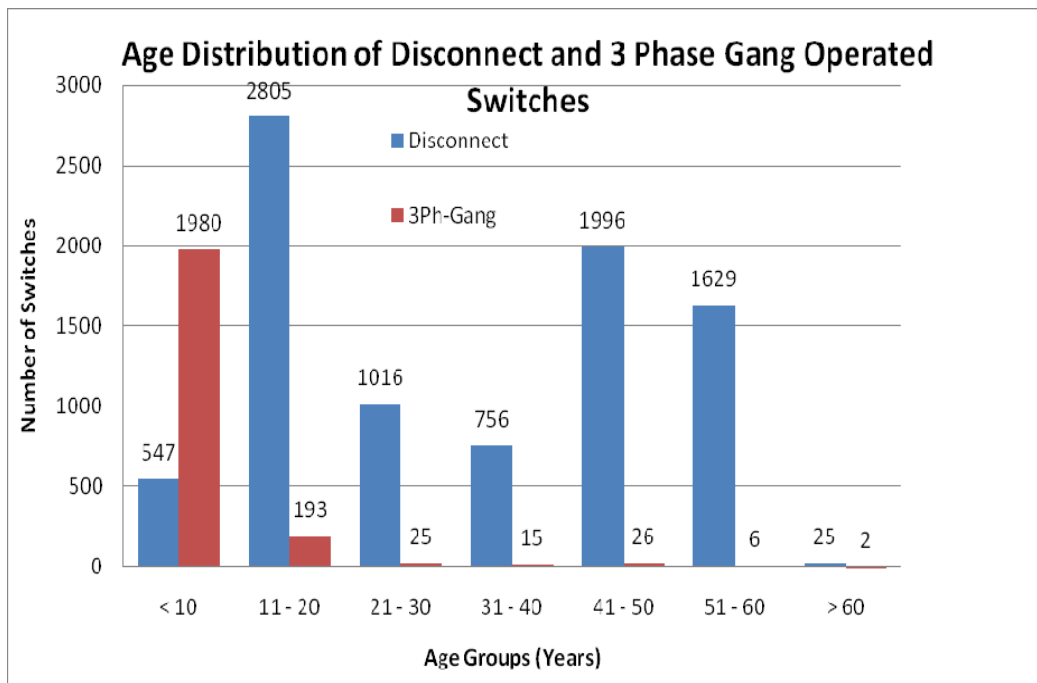
22 **d) Please comment on the view that the condition of the single phase switches would**  
23 **not be any different than those reported at the second reference at sections 16**  
24 **and 17.**

25

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

### 1 RESPONSE:

- 2 d) THESL disagrees with this view. The health profile of the single-phase switches  
3 should be poorer than that of the three-phase overhead gang switches discussed in the  
4 reference provided because the single-phase switches are generally older (average age  
5 is 39 years while the average age of the three-phase overhead gang switches is 5.23  
6 years). The figure below compares the age distribution profile of in-line disconnects  
7 with three-phase ganged switches that are intended for replacement.



- 8 In addition, THESL uses more than simply age or condition assessment when  
9 determining switch replacements. Other factors such as asset type, asset class,  
10 probability of failure and risk exposure are considered as explained in the business  
11 case evaluation described in Tab 4, Schedule B4, Appendix 1.

**RESPONSES TO ONTARIO ENERGY BOARD STAFF  
INTERROGATORIES ON ISSUE 2.2**

1 **e) Please comment on the view that age is not a determinant for replacing switches,**  
2 **but rather the condition assessment of such switches.**

3  
4 **RESPONSE:**

5 e) THESL uses more than simply age or condition assessment when determining switch  
6 replacements. Other factors such as asset type, asset class, probability of failure and  
7 risk exposure are considered as explained in the business case evaluation described in  
8 the Overhead portfolio at Tab 4, Schedule B4, Appendix 1.

9  
10 **f) Please indicate how many “Three Phase Overhead Gang (Man.) Switches “ and**  
11 **how many “Three Phase Overhead Gang (Rem.) Switches “ are intended to be**  
12 **replaced in the 238 locations in 2012, 547 in 2013 and 114 in 2014 as reported on**  
13 **pages 76-77 of the first reference under Option (a).**

14  
15 **RESPONSE:**

16 f) Based on THESL’s updated evidence, the new numbers for 2012 and 2013 switch  
17 replacements are 210 locations and 473 locations respectively. Of the 210 switch  
18 locations in 2012, there will be zero manual three-phase overhead ganged switches  
19 and 25 remotely operated three-phase overhead ganged switches replaced. Of the 473  
20 switch locations in 2013, there will be 24 manual three-phase overhead ganged  
21 switches and five remotely operated three-phase overhead ganged switches replaced.

7U

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

1 **INTERROGATORY 62:**

2 **Reference(s):** T4/S. B20/pp. 1- 3, 4

3

4 The table on page 3 of the reference indicates a total of \$22.9 million of metering  
5 expenses will be incurred from 2012-2014. About 71% of the total is for metering  
6 expenses related to Wholesale Metering Market Settlement Compliance (“WMMSC”)  
7 and the remainder is for seal expiring meters.

8

9 Page 1 of the reference indicates that the 2012-2014 replacements are needed in order to  
10 remain in compliance with the IESO Market Rules and Measurement Canada  
11 requirements.

12

13 Page 3 indicates that the proposed WMMSC replacements are necessary to complete full  
14 meter upgrades at all applicable delivery points by 2021 in accordance with THESL’s  
15 IESO approved proposal.

16

17 **a) Please explain how the proposed capital expenditures shown in the table on page**  
18 **3 of the reference were arrived at, including appropriate cost breakdowns.**

19

20 **RESPONSE:**

21 a) The Wholesale Metering Market Settlement Compliance cost estimates comprise of  
22 quotes from Hydro One (HONI) and cost estimates from THESL for work that each  
23 party will be responsible for. HONI work includes:

- 24 • replacement of switchgear within the Hydro One Transformer Substation;  
25 • upgrading of the instrument transformers to meet IESO regulations; and



## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

- 1       • de-commissioning and deregistering of HONI Metering Points and where  
2       required, relocation of the metering plant outside HONI's building to allow for  
3       THESL access.

4

5       THESL work includes:

- 6       • replacement of the main and alternate metering points;  
7       • commissioning, engineering, and decommissioning of the old meter point; and  
8       • installation of new WAN communication technology to enable daily and on-  
9       demand readings.

10

11       The cost breakdown is shown below:

2012	HONI ESTIMATE	THESL ESTIMATE	TOTAL
<b>WMMSC METERING</b>			
IESO Compliant Metering at Leslie TS ( T4J & T4Q)	\$480,000	\$180,000	\$660,000
IESO Compliant Metering at Strachan TS (A7-A8)		\$180,000	\$180,000
IESO Compliant Metering at Wiltshire TS (A3-A4)		\$180,000	\$180,000
<b>TOTAL</b>	<b>\$480,000</b>	<b>\$540,000</b>	<b>\$1,020,000</b>

/U

/U

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

2013	HONI ESTIMATE	THESL ESTIMATE	TOTAL
<b>WMMSC METERING</b>			
IESO Compliant Metering at Bermondsey TS (T1J, T1Q, T2J, T2Q, T3B, T3Y, T4B, T4Y)	\$1,520,000	\$280,000	\$1,800,000
IESO Compliant Metering at Scarboro TS (T21J, T21Q, T22J, T22Q, T23B, T23Y, T24B, T24Y)	\$1,520,000	\$280,000	\$1,800,000
IESO Compliant Metering at Dufferin TS (T2A5A6, T2A7A8, T4A5A6, T4A7A8)	\$760,000	\$140,000	\$900,000
IESO Compliant Metering at Fairbank TS (Y Bus, Z Bus, B Bus, Q Bus)	\$760,000	\$140,000	\$900,000
IESO Compliant Metering at Ellesmere TS (T3J, T3Q, T4J, T4Q)	\$760,000	\$140,000	\$900,000
<b>TOTAL</b>	<b>\$5,320,000</b>	<b>\$980,000</b>	<b>\$6,300,000</b>

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

2014	HONI ESTIMATE	THESL ESTIMATE	TOTAL	
<b>WMMSC METERING</b>				
IESO Compliant Metering at Gerrard TS (T1A4A5, T2A2A2, T3A1A2 & T4A4A5)	\$840,000	\$160,000	\$1,000,000	
IESO Compliant Metering at Warden TS (J Bus & Q Bus)	\$300,000	\$100,000	\$400,000	
IESO Compliant Metering at Basin TS (T3A5A6, T3A7A8, T5A5A6, T5A7A8)	\$840,000	\$160,000	\$1,000,000	
IESO Compliant Metering at Main TS (T3 & T4)	\$1,000,000	\$200,000	\$1,200,000	
IESO Compliant Metering at Manby TS (T13 & T14)	\$380,000	\$120,000	\$500,000	
IESO Compliant Metering at Runnymede TS (T3 & T4)	\$460,000	\$40,000	\$500,000	
IESO Compliant Metering at Bridgman TS (T5 & T11)	\$880,000	\$120,000	\$1,000,000	
IESO Compliant Metering at Leaside TS (M1, M2, M3, M4, M8, T19, T20, T21)	\$1,520,000	\$280,000	\$1,800,000	
IESO Compliant Metering at Esplanade TS (M11, M12, M13)	\$570,000	\$130,000	\$700,000	/U
IESO Compliant Metering at Terauley TS (T2, T3)	\$380,000	\$120,000	\$500,000	
IESO Compliant Metering at Strachan TS (T13, T15)	\$380,000	\$120,000	\$500,000	
<b>TOTAL</b>	<b>\$7,550,000</b>	<b>\$1,550,000</b>	<b>\$9,100,000</b>	/U
<b>TOTAL IESO Wholesale Metering Compliance Costs</b>	<b>\$13,350,000</b>	<b>\$3,070,000</b>	<b>\$16,420,000</b>	/U

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1     **Seal Expiry Meter Cost Breakdown**

Seal Expiring Meter Changes	2012		2013		2014	
Required Meter Change Details	Meters	Cost	Meters	Cost	Meters	Cost
Seal Expired RPP Conventional Meters includes 846 Asbestos	5,989	\$4,761,000	0	0	0	0
Conventional GS>50KW seal expired	70	\$53,699	0	\$0	0	\$0
RIMS seal expired	13	\$23,205	327	\$407,099	304	\$39,508
Quad Logic seal expired	336	\$119,952	1,376	\$491,589	4,703	\$839,486
Other Revenue Meters seal expired	0	\$0	6	\$3,511	292	\$87,049
<b>Seal Expiry</b>	<b>6,408</b>	<b>\$4,957,900</b>	<b>1,709</b>	<b>\$902,200</b>	<b>5,299</b>	<b>\$966,000</b>

/U

2     **b) Please provide copies of:**

- 3             • the Measurements Canada requirements that relate to the replacement of
- 4                     WMMSC meters;
- 5             • the IESO Market Rules that relate to the replacement of WMMSC
- 6                     meters; and
- 7             • THESL's IESO approved proposal to complete full meter upgrades at all
- 8                     applicable delivery points by 2021.

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

**RESPONSE:**

b) Measurement Canada Electricity and Gas Inspection Act, sets forth the requirements for all Meters (including WMMSC meters) as noted specifically in Sections 9,11 and 12 as provided as Appendix B to this Schedule. To remain in compliance with the Independent Electricity System Operator (IESO) rules, THESL must also comply with the IESO Wholesale Revenue Metering Standards –Hardware and IESO Market Rules hereto provided as Appendices C and D, respectively.

THESL's IESO-approved proposal to complete full meter upgrades at all applicable delivery points by 2021 is provided as Appendix A to this Schedule.

**c) Please state the estimated total cost of all the WMMSC replacements needed from 2012-2021.**

**RESPONSE:**

c) The estimated total cost of all the WMMSC replacements needed from 2012-2021 is \$20,560,000 as per the above schedule and cost estimates.

/U

**d) Please describe THESL's process for determining which replacements would be carried out in 2012-2014 and which would be deferred beyond 2014.**

**RESPONSE:**

d) THESL prioritized the WMMSC replacements for the 2012-2014 based on:

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

- 1           1) Regulatory compliance (seal expiry, IT's that do not meet current accuracy  
2           requirements) – these meters must be replaced to remain in compliance with  
3           Measurement Canada and IESO Regulations.
- 4           2) Planned switchgear replacements – the metering upgrades are more cost  
5           effective in conjunction with switch gear replacement.
- 6           3) Availability of HONI resources – HONI is eager to transfer the responsibility  
7           of being the MSP to Toronto Hydro and has committed resources for 2013  
8           and 2014 to expedite the process.
- 9
- 10          Complicated replacements, that are more effectively done in conjunction with  
11          switchgear replacements or more resource intensive replacements, were deferred until  
12          past 2014.

## RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2

1 **INTERROGATORY 73:**

2 **Reference(s):** T4/S C3/pp. 1-2

3

4 Page 1 of the reference states that THESL's Fleet is currently composed of 749 motor  
5 vehicles, including cars, pickups, bucket trucks and other vehicles (such as sweepers,  
6 backhoes and forklifts). Table 1 shows the various vehicle types, number of  
7 replacements and capital expenditures for each of 2012, 2013 and 2014. Based on  
8 Table1, the numbers of vehicles proposed for replacement are 21, 14 and 9 in 2012, 2013  
9 and 2014 respectively at a cost of \$2.00M per year.

10

11 **a) Please add a column to Table 1 to indicate the total number of vehicles in**  
12 **THESL's fleet for each of the vehicle categories listed.**

13

14 **RESPONSE:**

15 a) Please see the table below, which forecasts categories of THESL's fleet in which  
16 replacement vehicles are required.

Vehicle Description	2012		2013		2014		Current No. of Vehicles in Service*
	Number	Cost	Number	Cost	Number	Cost	
Car/Light Truck	5	0.14	-	-	-	-	322
Derrick	2	0.35	-	-	-	-	43
Forklift	1	0.11	-	-	-	-	28
Bucket Truck (Various Designs)	-	-	-	-	<del>6</del>	<del>1.69</del>	135
Cube Van	-	-	18	1.90	<del>3</del>	<del>0.31</del>	64
Vehicle Sub-Total	8	0.60	18	1.90	<del>9</del>	<del>2.00</del>	
<b>On-Vehicle Equipment</b>							
Rubber Power Line Covers		0.20		0.10			
<b>Total</b>		<b>0.80</b>		<b>2.00</b>		<b>2.00</b>	

\*Vehicle count information is as of Sept. 14, 2012.

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES ON ISSUE 2.2**

- 1 **b) Please state whether or not the numbers of vehicle replacements proposed for**  
2 **2012-2014 (average of 11 replacements peer year) typical of the number of**  
3 **replacements in the last 5 years. Please explain.**

4  
5 **RESPONSE:**

- 6 b) The number of vehicles proposed for replacement for 2012 to 2014 is lower than the  
7 numbers proposed in recent years. For the period 2009 to 2011, THESL purchased an  
8 average of 115 vehicles per year. The decrease in the planned vehicle replacements  
9 for 2012 to 2014 is due to THESL's decision to significantly reduce planned capital  
10 expenditures for the period 2012 to 2014.

11  
12 The information presented in Table 1 represents the vehicles that have the most  
13 urgent need of replacement, as determined through the analysis of historical  
14 maintenance costs, and the use of predictive modelling to estimate future operating  
15 costs. THESL anticipates that fleet vehicle maintenance and operating costs will  
16 increase during the period 2012 to 2014 as the average age of the fleet increases  
17 significantly through year 2014.



**RESPONSES TO ASSOCIATION OF MAJOR POWER CONSUMERS IN  
ONTARIO INTERROGATORIES ON ISSUE 2.2**

1 **INTERROGATORY 30:**

2 **Reference(s):**           **Tab 4, Schedule C2**

3

4 **a) Please provide a breakdown of the 2011 Carryover Projects into 2012 in Table 1 on**  
5 **Page 1.**

6

7 **RESPONSE:**

8 **a) Please see the table below.**

## RESPONSES TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO INTERROGATORIES ON ISSUE 2.2

PROJECT	Cost (\$M)	Description
CUSTOMER SELF SERVICE	\$3.27	Projects to meet the growing needs and expectations of tech savvy customers and improve online presence. THESL is enhancing customer experience via online self serve features (such as customer profile creation/change/deletion and access to time of use rate information).
REGULATORY REQUIREMENTS	\$2.80	The project also implements solutions to address changing regulatory requirements mainly the use of 'register' data instead of 'interval' data for time-of-use billing and suite meter automated reading.
PLANNED WORK AUTOMATION ENHANCEMENT	\$0.98	Includes the development of reports and analytics to support the distribution of work to field crews. The solution automates the customer service order process which enables crews to generate and report on reactive work in the field.
WAREHOUSE MANAGEMENT	\$1.90	The warehouse management project enables barcode scanning technology to minimize data entry errors and reduce input time. The project also enables asset inventory tracking as well as analytical reporting via integration with THESL's enterprise resource planning system.
LOGGING, DATA LOSS PREVENTION AND GOVERNANCE RISK CONSOLE	\$.95	The project delivers a security and event information management solution consisting of log aggregation, event correlation, analytics and reporting. It also focuses on creating clearly defined technical rules (technology system policies) which are monitored from a security perspective and evaluated via incidents where necessary actions would be identified.
TIME & ATTENDANCE	\$1.25	Implements a unified time and attendance system providing improved controls, better governance and accurate reporting. the project automates timekeeping data entry, approval, verification, processing, storage and reporting as well as exceptions, such as vacation or other absences.
<b>TOTAL</b>	<b>\$11.15</b>	

## **RESPONSES TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO INTERROGATORIES ON ISSUE 2.2**

1    **b) Please provide the useful life for IT hardware assets.**

2

3    **RESPONSE:**

4    b) Please see the table below.

<b>IT Hardware Asset Category</b>	<b>Asset Useful Life (Years)</b>
Servers	6
Storage and Backup	6
Network and Telephony	6
Printers and Plotters	5
User Endpoints (e.g., desktops, laptops etc.)	4
Security Appliances (e.g., Firewall System, Enterprise Data Warehouse, etc.)	4

5    Please also refer to response to OEB Staff interrogatory 72 (Tab 6F, Schedule 1-72).

## RESPONSES TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO INTERROGATORIES ON ISSUE 2.2

1 **INTERROGATORY 31:**

2 **Reference(s):**           **Tab 4, Schedule C3**

3

4 a) Please provide the useful life and age for each of the vehicles listed in table 1.

5

6 **RESPONSE:**

7 a) Please see the tables below.

2012			
Replacement Vehicle Type	Vehicle Year	Age (Yrs) in Planned Year of Replacement	Typical Useful Life
Car/Light Truck	2004	8	5
Car/Light Truck	2003	9	5
Car/Light Truck	2006	6	5
Car/Light Truck	2005	7	5
Car/Light Truck	2005	7	5
Derrick	1997	15	10
Derrick	1997	15	10
Forklift	Pre-2000	> 12 years	>10

/U

## RESPONSES TO ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO INTERROGATORIES ON ISSUE 2.2

2013			
Replacement Vehicle Type	Vehicle Year	Age (Yrs) in Planned Year of Replacement	Typical Useful Life
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7
Cube Van	2002	11	7

2014			
Replacement Vehicle Type	Vehicle Year	Age (yrs) in Year of Replacement	Typical Useful Life (yrs)
Cube Van	2002	12	7
Cube Van	2000	14	7
Cube Van	2002	12	7
Bucket Truck (Various Designs)	2002	12	10
Bucket Truck (Various Designs)	2002	12	10
Bucket Truck (Various Designs)	1998	16	10
Bucket Truck (Various Designs)	2003	11	10
Bucket Truck (Various Designs)	2002	12	10
Bucket Truck (Various Designs)	2002	12	10

## RESPONSES TO POLLUTION PROBE INTERROGATORIES ON ISSUE 2.2

1 **INTERROGATORY 3:**

2 **Reference(s):**           **Tab 4, Schedule B17, Appendix 3, page 7, Table 1**

3

4 Please provide the forecast coincident demands of the Downtown Core for each year  
5 from 2012 to 2021. Please break out the demands by each of the five transformer stations  
6 and for each transformer station please break out the demands by rate class.

7

8 **RESPONSE:**

9 The forecast coincident demands for the five transformer stations that supply the  
10 downtown core have been reproduced in the table below, based on information provided  
11 in Tab 4, Schedule 17, pages 10-11 as well as Tab 4, Schedule 17, Appendix 2 and 3.

12 THESL is unable to break out the demands by rate class.

Station	Station Rating	Year										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cecil	224	187	183	186	190	195	199	202	207	211	215	220
Esplanade	198	180	180	184	189	188	191	194	200	203	207	210
Strachan	175	138	138	143	150	153	157	160	164	166	170	174
Terauley	240	190	193	196	201	205	209	213	217	222	226	230
Windsor	340	311	310	316	322	329	335	340	348	355	363	371
Total	1177	1006	1004	1025	1052	1070	1091	1109	1136	1157	1181	1205

/U

## **RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES ON ISSUE 2.2**

1 **INTERROGATORY 17:**

2 **Reference(s):**           **Tab 4/B1/p.3**

3

4 Please expand Table 1 to include:

- 5           a. Estimated cost per year
- 6           b. Unplanned sustained outages for 2010
- 7           c. Unplanned sustained outages for 2011
- 8           d. Unplanned sustained outages year to date

9

10 **RESPONSE:**

11 The requested information is provided in the attached table in Appendix A.

Job #	Job Title	Year	Estimated Cost (\$M)	Estimated Cost per year (\$M)			Unplanned Sustained Outages		
				2012	2013	2014	2010	2011	Jan 1 2012 - Aug 31 2012
1	Underground Rehabilitation of Feeder NY80M29	2012, 2013	\$2.90	2.36	0.54		7	15	6 /U
2	Underground Rehabilitation of Feeder SCNAR26M34	2012, 2013, <del>2014</del>	\$2.33	1.85	0.48	1.60	7	12	2 /U
3	Underground Rehabilitation of Feeder NY55M8	2013	\$2.50	2.50			10	12	4 /U
4	Underground Rehabilitation of Feeder YK35M10	2012	\$2.32	2.32			6	11	11 /U
5	<del>Underground Rehabilitation of Feeder SCNT63M4</del>	<del>2014</del>	<del>\$3.16</del>			<del>3.16</del>	<del>3</del>	<del>10</del>	<del>2</del>
6	Underground Rehabilitation of Feeder SCNA47M14	2012, 2013	\$4.43	2.77	1.66		6	10	4
7	Underground Rehabilitation of Feeder NY51M6	2012	\$2.91	2.91			10	10	5 /U
8	<del>Underground Rehabilitation of Feeder NY80M8</del>	<del>2014</del>	<del>\$9.51</del>			<del>9.51</del>	<del>7</del>	<del>8</del>	<del>4</del>
9	<del>Underground Rehabilitation of Feeder NY85M6</del>	<del>2014</del>	<del>\$2.01</del>			<del>2.01</del>	<del>3</del>	<del>8</del>	<del>4</del>
10	Underground Rehabilitation of Feeder NY51M8	2013, <del>2014</del>	\$1.26		1.26	0.32	7	8	9 /U
11	Underground Rehabilitation of Feeder SCNA502M22	2012, 2013, <del>2014</del>	\$2.78	1.61	1.17	0.25	6	7	2 /U
12	Underground Rehabilitation of Feeder SCNAH9M30	2012, <del>2014</del>	\$0.84	0.84		2.75	11	7	11 /U
13	Underground Rehabilitation of Feeder NY85M4	2013, <del>2014</del>	\$2.48	2.48		3.31	4	7	2 /U
14	Underground Rehabilitation of Feeder SCNA47M13	2012, <del>2014</del>	\$3.47		3.47	0.96	6	6	5 /U
15	Underground Rehabilitation of Feeder NY80M2	2012	\$0.80	0.8			7	6	4 /U
16	Underground Rehabilitation of Feeder NY51M7	2013	\$1.13		1.13		9	6	3 /U
17	Underground Rehabilitation of Feeder NY51M24	2013, <del>2014</del>	\$3.21		3.21	0.67	6	6	5 /U
18	Underground Rehabilitation of Feeder NY80M30	2012	\$4.07	4.07			13	6	4 /U
19	<del>Underground Rehabilitation of Feeder NY55M23</del>	<del>2014</del>	<del>\$2.24</del>			<del>2.24</del>	<del>8</del>	<del>6</del>	<del>8</del>
20	<del>Underground Rehabilitation of Feeder NY85M24</del>	<del>2014</del>	<del>\$2.03</del>			<del>2.03</del>	<del>3</del>	<del>6</del>	<del>5</del>
21	Underground Rehabilitation of Feeder SCNAE5-2M3	2012	\$1.51	1.51			6	6	9 /U
22	<del>Underground Rehabilitation of Feeder NY85M7</del>	<del>2014</del>	<del>\$13.83</del>			<del>13.83</del>	<del>4</del>	<del>6</del>	<del>4</del>
23	Underground Rehabilitation of Feeder SCNT63M12	2012, 2013, <del>2014</del>	\$7.68	5.86	1.82	2.62	9	5	3 /U
24	Underground Rehabilitation of Feeder SCNT63M8	2012, 2013, <del>2014</del>	\$5.05	2.39	2.66	2.25	4	5	5 /U
25	Underground Rehabilitation of Feeder SCNAE5-1M29	2012	\$3.97	3.97			5	5	8 /U
26	Underground Rehabilitation of Feeder NY53M25	2013	\$2.40		2.40		6	5	4 /U
27	<del>Underground Rehabilitation of Feeder NY80M9</del>	<del>2014</del>	<del>\$2.21</del>			<del>2.21</del>	<del>3</del>	<del>5</del>	<del>4</del>
28	Underground Rehabilitation of Feeder SCNT47M3	2012, 2013, <del>2014</del>	\$16.98	15.02	1.96	0.79	12	4	3 /U
29	<del>Underground Rehabilitation of Feeder SCNAH9M23</del>	<del>2014</del>	<del>\$2.71</del>			<del>2.71</del>	<del>4</del>	<del>4</del>	<del>3</del>
30	Underground Rehabilitation of Feeder NY51M3	2012, 2013, <del>2014</del>	\$0.37	0.03	0.34	2.56	7	4	2 /U
31	Underground Rehabilitation of Feeder SCNA47M17	2012	\$1.10	1.10			12	3	2 /U
32	Underground Rehabilitation of Feeder NY85M31	2013	\$0.34		0.34		1	3	2 /U
33	<del>Underground Rehabilitation of Feeder SCNA502M21</del>	<del>2014</del>	<del>\$2.56</del>			<del>2.56</del>	<del>3</del>	<del>2</del>	<del>4</del>
34	Underground Rehabilitation of Feeder SCNT47M1	2012, 2013, <del>2014</del>	\$6.63	3.21	3.42	6.58	7	2	0 /U
35	Underground Rehabilitation of Feeder NY55M21	2013	\$1.51		1.51		4	2	7 /U
36	Underground Rehabilitation of Feeders NY85M1, NY85M9 and NYSS58F1	2012, 2013	\$2.66	1.97	0.69		24	16	9 /U



## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES ON ISSUE 2.2**

### **INTERROGATORY 55:**

**Reference(s):**           **Tab 4, Schedule B5, Section V (Description of Work)**

a) For many of the jobs, the stated objective is to prepare the MS for conversion from 4.16kV to 13.8kV. When will these conversions actually occur? If within the 2012-2014 period, where are the decommissioning costs reflected?

### **RESPONSE:**

a) "Conversion" from 4kV to 13.8kV refers to the 4kV feeders themselves, rather than the 4kV municipal stations (MS). Once all 4kV feeders from a given MS are converted to 13.8kV, the MS will no longer have any load and can be de-energized/decommissioned. Assuming all projects in this portfolio will be executed, the following stations will have no load and will be ready for de-energization and eventual decommissioning by the following years:

- Hazelwood MS – 2014
- College MS – 2013
- Keele & St Clair – 2013
- Merton MS – 2014
- Millwood MS – 2014
- Dufferin MS – 2014

/U

The cost of decommissioning the stations was not included. The high level estimate for station decommissioning cost is relatively small at ~\$50k per station. However, potential savings from spare parts inventory from station equipment deemed in reusable condition (which avoids purchasing legacy spares) could potentially offset

**RESPONSES TO VULNERABLE ENERGY CONSUMERS  
COALITION INTERROGATORIES ON ISSUE 2.2**

- 1 the station decommissioning cost to some degree. As result, station decommissioning
- 2 costs were not included.

## RESPONSES TO CONSUMERS COUNCIL OF CANADA INTERROGATORIES ON ISSUE 4.2

1 **INTERROGATORY 24:**

2 **Reference(s):**           **none provided**

3

4 Assuming THESL's application, as filed, is accepted by the Board, please set out the  
5 distribution rate increase for a typical residential customer for each year 2012-2014. In  
6 addition, please provide the total bill impact for a typical residential customer for each  
7 year.

8

9 **RESPONSE:**

10 The updated information requested can be found in Tab 3, Schedule C1.2, page 1 and  
11 Tab 3, Schedule C2.2, page 1. For convenience, the information is summarized below.

	Monthly Bill			Change (\$)		Change (%)	
	2011 Approved Rates	2012 Interim Rates	2013 Proposed	2012 over 2011	2013 over 2012	2012 over 2011	2013 over 2012
Distribution (inclg. rate riders)	\$29.50	\$31.33	\$35.37	\$1.83	\$4.04	6.2%	12.9%
Transmission	\$10.09	\$10.09	\$11.36	\$0.00	\$1.27	0.0%	12.5%
Regulatory, DRC and Energy	\$72.94	\$76.33	\$76.33	\$3.39	\$0.00	4.6%	0.0%
Total bill (before taxes)	\$112.53	\$117.75	\$123.05	\$5.22	\$5.30	4.6%	4.5%
Evidence Reference	Tab 3, Schedule C1.2, p.1	Tab 3, Schedule C2.2, p.1	Tab 3, Schedule C2.2, p.1				

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**RESPONSES TO CONSUMERS COUNCIL OF CANADA  
INTERROGATORIES ON ISSUE 4.2**

1 As described in its cover letter, dated October 31, 2012, THESL has asked the OEB to  
2 consider the work programs identified for 2012 and 2013 together, and to defer  
3 consideration of the work program for 2014 to a later date. In light of this requested  
4 bifurcation of the proceeding and THESL's obligation to update the 2014 information for  
5 any material changes prior to it being reviewed, it would not assist the OEB or  
6 intervenors to provide the 2014 information requested in this interrogatory during the first  
7 phase of this application.