Exhibit R1
Tab 4
Schedule 1

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 <b>INTERROGATORY</b>	<i>7</i> 1	R	$\mathbf{O}$	$\mathbf{T}$	A	G	C	R	R	$\mathbf{E}$	Τ	N	T	1
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2 **Reference(s):** A1/T5/S1/p. 1

3

- Please provide the total cost of the report commissioned by Key Willow Consulting and
- 5 indicate how those costs were recovered. Please provide the RFP that was issued and the
- 6 terms of reference for the study.

7

- The total cost of the KeyWillow study was \$39,240 plus GST. The cost was included in
- the Regulatory Affairs operating budget for 2009. Please see response to School Energy
- 11 Coalition interrogatory #38 Appendix C for the KeyWillow proposal.

Exhibit R1
Tab 4
Schedule 2

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 IN	IT	ER	RO	GA	TC	)RY	2:
1 11	ч.	$\mathbf{L}$	$\mathbf{n}$	$\mathbf{U}$		,,,,	_

2 **Reference(s): Q1/T5/S1** 

3

- 4 Please describe how the Key Willow Consulting Report, "An Analysis of Productivity
- 5 Improvements at Toronto Hydro-Electric System Limited" was prepared. Please indicate
- 6 what type of review the consultant undertook and to what extent THESL employees were
- 7 involved in the preparation of the report. How, specifically did the consultant obtain the
- 8 information contained in the report?

9

#### 10 **RESPONSE**:

Please see response to School Energy Coalition interrogatory #38.

Exhibit R1 Tab 4 Schedule 3

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATORY 3:	
2	Reference(s): A1/T5/S1/p. 2	
3		
4	Please specifically explain how THESL intends to "develop a system capable of	
5	measuring costs avoided relative to cost levels that would have occurred in the absence	e.'
6		
7	RESPONSE:	
8	The full quotation from the evidence is as follows:	
9	"In summary, there is no reasonable fixed point of reference from which	
10	conventionally measured productivity gains can be calculated. However,	
11	it is practical and constructive to develop a system capable of measuring	
12	costs avoided relative to cost levels that would have occurred in the	
13	absence of cost containment initiatives, and THESL plans to move ahead	
14	with the development of such an approach."	
15		
16	THESL has no means or plans to measure "avoided costs" at a detailed operational lev	/el
17	i.e., by distribution project, for example. However, THESL may be able to collect fro	m
18	sources such as business cases information which could indicate for major investment	S
19	what alternative costs in the absence of the project might be and therefore what costs	
20	would be avoided by making the investment. Similar information could be available i	n
21	certain other instances such as process or technology innovations.	
22		
23	THESL has not yet determined what the scope of such information could be and how	
24	such information might be consolidated.	

EB-2009-0139 Exhibit R1 Tab 4 Schedule 4

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 INTERROGATORY 4:
- 2 **Reference(s): B1/T4/S2-3**

3

- 4 Please provide an updated Organization Chart, given the recent changes in THESL's
- 5 executive team.

6

#### 7 **RESPONSE:**

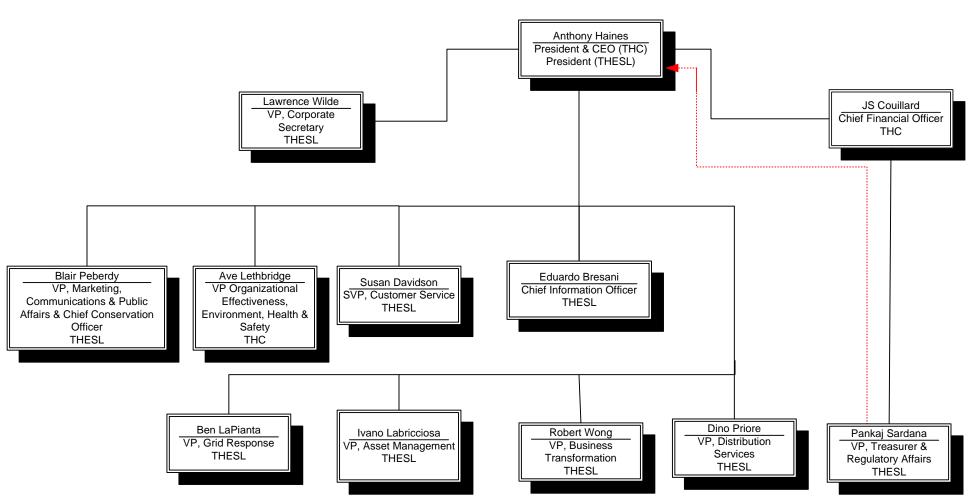
8 An updated THESL Organization Chart is attached as Appendix A.

Exhibit R1, Tab 4, Schedule 4, Appendix A

Filed: 2009 Nov 30

(1 page)

# Toronto Hydro-Electric System Limited Organization Chart



— Direct Reporting

Indirect Reporting

EB-2009-0139 Exhibit R1 Tab 4 Schedule 5

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 INTERROGATORY	5:
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2 Reference(s): C1/T4/S1

3

- 4 The evidence states that the business planning process begins in the second quarter of
- each year with a review of prior year results and ends late in the year with approval of the
- business plan by THESL's Board of Directors. Please provide a copy of the 2010
- business plan that was presented to the THESL Board. In addition, please provide copies
- of all materials, presentations and reports that were provided to the Board as part of the
- 9 2010 Business Plan approval process.

10

#### 11 **RESPONSE**:

Please see the response to SEC interrogatory #4.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 6

Filed: 2009 Nov 30 Page 1 of 1

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 INTERROGATORY 6:
--------------------

2 Reference(s): C1/T4/S2

3

- 4 THESL has provided, as a part of its evidence, Toronto Economic Indicators. Please
- 5 explain how those values have been used in the preparation of the 2010 budget.

6

7

- 8 THESL's 2010 budget is an extensive "bottom-up" approach which focuses on its long-
- 9 term strategy as the key driver for the budget and multi-year plan. This focus implies that
- THESL's capital needs related to its modernization strategy, its workforce renewal plan,
- and its focus on customer service figure more prominently as cost drivers for the budget.
- 12 Toronto Economic Indicators are accounted for in the overall budget primarily as part of
- the process used to determine overall compensation increases, expected increases in
- external product and services purchased by THESL, and as an input into the load
- 15 forecast.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 7

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 **INTERROGATORY 7:**
- 2 Reference(s): C1/T5/S1

3

- 4 THESL has provided new Conditions of Service dated February 27, 2009. Please
- 5 provide a list setting out all of the changes made to the Conditions of Service that are
- 6 reflected in the new draft.

- **RESPONSE:**
- 9 The February 27, 2009 Conditions of Service Revision Summary was included with the
- filed application, and is located in Exhibit C1, Tab 5, Schedule 2.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 8

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INT	<b>TERR</b>	OGA	CT	RY	8:
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2 **Reference(s):** Q1/T4/S1-1

3

- 4 Please provide the total costs of the Navigant Study "Distributed Generation in Central
- 5 and Downtown Toronto". Please explain how the costs of the report were recovered.
- 6 Please explain how the results of the study factored into THESL's capital and operating
- 7 budgets for 2010.

8

- THESL's share of the costs for the study over 2008 and 2009 were \$154,810. The
- study's costs were classified as operating expenditures and recovered as such. The
- results of the study did not factor into the 2010 capital and operating budgets.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 9

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATORY 9:
2	Reference(s): none
3	
4	Please provide an estimate of the total OM&[A] costs included in the 2010 budget
5	specifically related to the GEGEA. Has THESL undertaken a cost/benefit analysis with
6	respect to the expenditures driven by the GEGEA? If so, please provide a copy of that
7	analysis.
8	
9	RESPONSE:
10	The estimate total O&M cost included in the 2010 budget is \$450,000. This is the
11	expenditure estimated for studies under the Environmental Sustainment Project.
12	
13	Projects have not gone through an economic assessment as explicit benefits and costs
14	have yet to be measured.
15	
16	The value proposition and rationale for each of the 2010 initiatives are discussed in
17	Exhibit G1, Tab 1, Schedules 2 and 3. Each project is fully aligned with the smart grid
18	objectives as described in Exhibit G1, Tab 1, Schedule 1, page 5.

Exhibit R1 Tab 4 Schedule 10

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

	INT	FDD	$\Omega C \Lambda$	TOD	Y 10:
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2 Reference(s): C1/T3/S1/Appendix A

3

- 4 Please provide a detailed description and budget amounts for the \$2.4 million expenditure
- 5 related to Governance and Finance services provided by THC to THESL.

6

7

- 8 As discussed in Exhibit C1 Tab 3 Schedule 1 Appendix A, the cost of \$2.4 million is
- 9 comprised of \$1.7 million for Governance and \$0.74 million for Finance. Governance
- includes stewardship and leadership of the CEO, including providing direction,
- leadership and communication to the organization and governance for the board of
- directors. Note that the amount for the Office of CEO has been reduced as shown in
- Exhibit R1, Tab 11, Schedule 3. Finance includes stewardship and leadership of the
- 14 CFO, in providing strategic direction, leadership and communication to the finance group
- and the organization. These services are further defined in Exhibit C1, Tab 3, Schedule
- 16 3.

Exhibit R1 Tab 4 Schedule 11

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 11:**

2 Reference(s): Ex. C1/T3/S2-

3

- 4 Please provide an updated service agreement between THESL and THC for 2010 Shared
- 5 Services which reflects the new organizational changes.

6

- 8 The SLA filed with the application at Exhibit C1, Tab 3, Schedule 2-2 remains in effect
- 9 as the governance services provided have not changed.

Exhibit R1
Tab 4
Schedule 12

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 IN	TERRO	GATO	)RY	12:
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2 Reference(s): C2/T1/S2/Appendix A

3

- 4 Please provide a schedule in the same format as Appendix A setting out Total
- 5 Compensation Costs, Actual and Board Approved for the years 2006-2009. For 2009
- 6 include the most recent forecast of total compensation.

- 8 **Response:**
- 9 The Board did not approve total compensation costs for the years 2006-2009. Rather, it
- authorized an overall revenue requirement as part of the process of setting just and
- reasonable rates. A table of Employee Compensation for the years 2006-2009 is
- provided at Appendix A to this Schedule.

Exhibit R1 Tab 4 Schedule 12 Appendix A

#### **TABLE 1: EMPLOYEE COMPENSATION**

Filed: 2009 Nov 30 Page 1 of 1

				2000 Pavised
	2006 Actual	2007 Actual	2008 Actual	2009 Revised Forecast
Number of Employees (FTEs including Part-Time)				
Executive	6	10	10	9.0
Managerial	21	38	41	47.0
Management/Non-Union	137	265	275	287.9
Union *	1,187	1,212	1220	1,242.9
Total *	1,351	1,525	1546	1,586.8
* Excludes President & Vice President of CUPE Local One	1,001	=,===		_,
Number of Part-Time Employees				
Executive				
Management (Managerial)				
Non-Union (Management/Non-Union)				
Union				
Total				
Total Salary and Wages	1 105 453	1 714 200	1 013 500	1 (22 244
Executive	1,105,452	1,714,398	1,812,508	1,623,214
Managerial	2,533,230	4,679,679	4,960,743	5,760,287
Management/Non-Union	11,860,501	23,652,288	24,637,246	29,488,805
Union	80,321,916	85,537,115	88,723,958	92,973,773
Total	95,821,099	115,583,480	120,134,455	129,846,078
Total Benefits				
Executive	436,776	667,994	818,469	824,687
Managerial	917,973	1,616,795	1,690,280	2,103,804
Management/Non-Union	4,140,551	8,208,444	8,509,707	10,796,343
Union	29,213,257	30,339,717	30,960,867	33,496,773
Total	34,708,557	40,832,950	41,979,324	47,221,607
Total Compensation (Salary, Wages, & Benefits)				
Executive	1,542,228	2,382,392	2,630,977	2,447,900
Managerial	3,451,203	6,296,474	6,651,023	7,864,091
Management/Non-Union	16,001,052	31,860,731	33,146,953	40,285,148
Union	109,535,173	115,876,832	119,684,825	126,470,546
Total	130,529,656	156,416,429	162,113,778	177,067,685
Compensation - Average Yearly Base Wages				
Executive	184,242	171,440	181,251	180,357
Managerial	120,630	122,689	121,783	122,559
Management/Non-Union	86,573	89,247	89,665	102,427
Union	67,668	70,575	72,700	74,804
Compensation - Average Yearly Overtime	07,000	70,373	72,700	7 1,00 1
Executive Executive		-	0	0
Managerial		_	0	0
Management/Non-Union	7,307	4,841	4,297	3,089
Union	10,157	12,534	9,498	13,596
	10,137	12,334	9,496	13,390
Compensation - Average Yearly Incentive Pay	FO 142	F0 C42	70.000	05.704
Executive	50,143	59,643	70,902	85,794
Managerial	14,662	18,344	22,732	26,478
Management/Non-Union	4,721	5,114	6,769	8,484
Union**	3,396	4,890	5,063	6,584
**Only inlcudes The Society of Energy Professional, Crew Leaders, System Response R	ер			
Compensation - Average Yearly Benefits				
Executive	72,796	66,799	81,847	91,632
Managerial	43,713	42,388	41,495	44,762
Management/Non-Union	30,223	30,973	30,970	37,500
Union	24,611	25,033	25,369	26,950
Total Compensation	144,823,642	175,664,371	178,510,702	199,518,679
Total Compensation Charged to OM&A	72,382,856	98,090,985	96,609,992	107,799,942
Total Compensation Capitalized	72,440,786	77,573,386	81,900,710	91,718,737

Exhibit R1 Tab 4 Schedule 13

Filed: 2009 Nov 30 Page 1 of 1

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

ı	IN	JT	E	RI	30	GA	T	)R	Y	13	•

2 Reference(s): C2/T1/S2/Appendix A

3

- 4 Total Compensation for 2008 was \$11.4 million less than the Board approved level.
- 5 Please explain, in detail the reasons for the variance

6

- 8 The Board did not approve a compensation level for 2008. Rather, the Board approved
- an overall spending level for controllable costs with the clear direction to THESL to
- manage accordingly (see EB-2007-0680 Decision, page 38). The \$11.4 million variance
- between THESL's request and actual spending in 2008 resulted from changes made to
- 12 THESL's hiring plan. A decision was made to curtail hiring to manage overall costs in
- light of the reduction to THESL's capital budget request in 2008 and 2009, and to ensure
- new employees could be safely and effectively integrated into the workplace. The
- introduction of some 100 new employees to a workforce with a trades apprentice
- 16 complement of a similar number would risk compromising safety, proper skills
- attainment and operational productivity. To meet its resource needs of the capital plan
- for 2010, THESL will integrate new employees at a sustainable volume and pace,
- supplemented by contractors.

Exhibit R1 Tab 4 Schedule 14

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

ı IN	JT	$\mathbf{E}\mathbf{I}$	2 R	O	GA	T	<b>DRY</b>	14	1.
	<b>1</b> I	171					<i>,</i> 1 1		т.

2 **Reference(s): C2/T1/S5/p. 1** 

3

- The evidence states that in the coming year THESL will be faced with three critical
- 5 impacts on staffing one of which is the GEGEA with its new opportunities and
- 6 obligations. What is THESL's estimate of the impact of the introduction of the GEGEA
- on Total Compensation. In effect how much of the \$224.3 million budget is driven by
- 8 the GEGEA?

9

- Approximately \$430K of the \$224.3 million budget is associated with the GEGEA.
- These new hires will be employees of THESL for the foreseeable future. These
- employees are not being hired to work exclusively in support of a specific program. Over
- the course of their employment, they will be assigned to support a number of different
- programs and activities.

Exhibit R1
Tab 4
Schedule 15

Filed: 2009 Nov 30 Page 1 of 1

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 INTERROGATORY 15:	1 IN	TERRO	GATC	RY	15:
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2 **Reference(s):** C2/T1/S5/p. 5

3

- 4 The evidences states that, "To address the shortfall in labour needed to complete the 2010
- 5 Work Program, THESL has engaged 20 separate design and/or civil construction and/or
- 6 electrical construction contract firms." An RFP was delivered in August and approval for
- the winning proposals will be provided by THESL's Board in October. Please provide a
- 8 copy of the RFP issued and the results of that process. What are the expected costs of
- 9 this initiative, both OM&A and Capital? Where are the costs of this initiative found in
- the evidence?

11

#### 12 **RESPONSE**:

Please see response to OEB interrogatory #45 at Exhibit R1, Tab 1, Schedule 45.

Exhibit R1
Tab 4
Schedule 16

Filed: 2009 Nov 30 Page 1 of 1

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

ı 1	IN.	$\mathbf{IT}$	$\mathbf{E}$	R	R	O	G.	Δ'	$\mathbf{T}$	n	R	$\mathbf{Y}$	1	6	•

2 **Reference(s):** C2/T1/S5/p. 5

3

- 4 The evidence states that from 2009 to 2010 approximately 50 technical apprentices will
- be hired and deployed to the distribution asset renewal plan or Smart Grid. What is the
- 6 cost of those technical apprentices for 2010 and where are those costs found in the
- 5 budget? How many of those technical apprentices will be hired to work on Smart Grid
- 8 projects?

9

10

- The total cost is approximately \$2.6 million and these costs are found in the budgets of
- the operating units. No technical apprentices will be hired to work specifically on Smart
- Grid projects, but they will be trained to work on Smart Grid projects because these
- projects are expected to become a regular part of distribution system construction,
- operations, and maintenance.

Exhibit R1
Tab 4
Schedule 17

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 INTERROGATORY 17:

2 **Reference(s): D1/T13/S1** 

3

4 Please indicate when THESL last undertook a depreciation study.

- 6 **RESPONSE:**
- 7 THESL has not undertaken a depreciation study.

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 18:**

2 **Reference(s): F1/T1/S1/p. 3** 

3

- Please recast Table 2 Summary of Distribution O&M budget to include 2008 and 2009
- 5 Board approved numbers. Also, please include 2006 and 2007.

6

#### 7 **RESPONSE:**

- 8 Contrary to the question, the Board did not approve budget levels for specific O&M
- 9 activities for 2008 and 2009. Rather, the Board authorized an overall amount for
- controllable expenses. Refer to Table 1 below for historical and bridge information.

11

12

**Table 1: Distribution O&M Expenditures (\$ millions)** 

Description	2006 Historical	2007 Historical	2008 Historical	2009 Bridge
Maintenance Programs	23.9	24.5	26.8	26.0
Fleet and Equipment Services	10.9	11.4	9.2	10.9
Facilities Services	24.3	29.5	25.4	24.3
Supply Chain Services	6.6	8.4	8.4	9.6
Control Center	7.1	7.3	7.2	8.0
Operations Support	36.9	48.1	37.1	43.6
Customer Services	41.1	43.5	41.0	46.2
Customer Driven Operating <sup>1</sup>			0.8	0.8
Total	150.7	172.7	155.9	169.3

13

14

<sup>1</sup>Customer-driven Operating was not tracked previous to 2008 and was

included in Operations Support pre-2008.

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 19:**

2 Reference(s): F2/T1/S1

3

- 4 Please recast Table 1 Distribution Expenses Administrative and General to include all
- 5 years 2006-2009, Board approved and actual.

6

# 7 **RESPONSE:**

- 8 Contrary to the question, the Board did not approve budget levels for specific activities
- 9 A&G activities in 2008 and 2009. Rather, the Board authorized an overall amount for
- controllable expenses. Refer to Table 1 below for historical and bridge information.

11

12

#### **Table 1: Distribution A&G Expenditures (\$ millions)**

	2006	2007	2008	
Description	Historical	Historical	Historical	2009 Bridge
Governance	48.3	11.2	14.9	13.7
Charitable Contributions	0.2	0.1	0.1	0.2
Finance	3.1	3.6	4.3	4.5
Treasury, Rates and Regulatory	9.6	11.3	9.9	11.4
Legal	2.5	2.4	3.1	2.8
Communications	3.8	3.8	4.3	4.1
Information Technology	22.7	18.1	21.4	22.3
Organizational Effectiveness &				
Environmental Health and Safety	6.3	7.9	9.7	9.9
Strategic Management		0.5	1.1	1.4
Total	96.4	58.7	68.8	70.2

EB-2009-0139 Exhibit R1 Tab 4 Schedule 20

Filed: 2009 Nov 30 Page 1 of 1

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

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2 **Reference(s):** F1/T1/S2/p. 4

3

- The evidence states that the total preventative maintenance program costs are increasing
- by \$3.4 million to capture costs needed for street lighting asset verification in preparation
- 6 for inclusion into THESL. If the Board rejects THESL's application to move
- 5 streetlighting into THESL will THESL agree to remove this item from the budget. If not,
- 8 why not?

9

- No. Please see Exhibit R1, Tab 1, Schedule 15, the response to Board Staff interrogatory
- 12 #15.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 21

Filed: 2009 Nov 30 Page 1 of 1

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 INTERROGATORY 21:

2 **Reference(s):** F1/T1/S3/p. 4

3

- 4 The evidence states that THESL has, in 2008, adopted and implemented a reliability
- based tree pruning program. Please provide the budget for the program in 2008, 2009
- and 2010. Also, please include tree pruning costs for the period 2004-2007. Please
- 7 provide a business case for this program. Please explain how it differs from the previous
- 8 methodology.

9

#### **RESPONSE:**

Table below is historical tree trimming budget (in \$Millions):

12

10

2004	2005	2006	2007	2008	2009	2010
n/a	\$1.8	\$1.8	\$3.2	\$3.3	\$3.2	\$3.7

13

- The business case for the reliability based tree trimming is contained in a report by
- Davies Consulting Inc. dated June 20, 2007. See Exhibit R1, Tab 9, Schedule 23, part a.

- 17 This tree trimming methodology is a departure from the traditional fixed cycle approach.
- The reliability-based tree trimming program analyzes historical tree-related outages along
- with cost of trimming for each feeder. The result is a tree trimming program that has a
- 20 cycle determined for each feeder based on its reliability impact and cost benefit that
- 21 achieves the optimal return versus maintenance cost.

Exhibit R1
Tab 4
Schedule 22

Filed: 2009 Nov 30 Page 1 of 2

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATORY 2	2:
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2 **Reference(s): F1/T1/S1/p. 3** 

3 **F1/T6/S1p. 3** 

4

- 5 Please explain the difference between Table 2 Summary of Distribution O&M Budget
- and Table 1 Operations Support Costs. Is there overlap between the budgets found in
- these two tables? Please provide a table setting out all elements of Operations,
- 8 Maintenance and Administration for the years 2006-2010.

9

10

#### **RESPONSE:**

- "Table 2: Summary of Distribution O&M Budget" describes THESL's O&M programs,
- with the Operations Support costs segregated into a distinct category for each budget
- 13 year. "Table 1: Operations Support Costs" on the other hand illustrates the Capital and
- O&M program costs and the Operations Support costs associated with each program, for
- each budget year.

Exhibit R1 Tab 4 Schedule 22 Filed: 2009 Nov 30

Page 2 of 2

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

# 1 Table 1: Table setting out all elements of Operations, Maintenance and

# 2 Administration for the years 2006-2010

Description	2006 Historical	2007 Historical	2008 Historical	2009 Bridge	2010 Test
Maintenance Programs	23.9	25.8	26.8	26.0	34.5
Fleet and Equipment Services	10.9	11.8	9.2	10.9	11.8
Facilities Services	24.3	36.7	25.4	24.3	25.8
Supply Chain Services	6.6	9.8	8.4	9.6	9.3
Control Centre	7.1	6.9	7.2	8.0	7.4
Operations Support	36.9	45.0	37.1	43.6	46.0
Customer Services	41.1	43.0	41.0	46.2	51.9
Customer-Driven Operating	2.0	2.0	0.8	0.8	0.8
Total	152.8	181.0	155.9	169.4	187.5

Exhibit R1
Tab 4
Schedule 23

Filed: 2009 Nov 30 Page 1 of 1

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

ı II	VΊ	TE.	RR	0	GA	TC	RY	23.

2 Reference(s): Exhibit F1, Tab 7, Schedules 1, page 1

3

- 4 The evidence states that a recently launched initiative to convert bulk-metered building to
- 5 individual metered is expected to add 12,000 customers by year end 2010. Please
- 6 provide the business case for this initiative.

7

- 9 THESL did not complete a business case to convert bulk-metered buildings to individual
- metering . THESL has always responded to requests for conversions from bulk to
- individual metering, and did not regard the continuance of this practice as a new business.
- The recently launched initiative referred to in the evidence was a revision in our
- standards regarding the types of meters that were acceptable for installation.

# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATO	DRY 24:
2	<b>Reference</b> (s):	Exhibit F1, Tab 7, Schedule 1, Page 3
3		
4	Please provide a c	omplete description of THESL's Suite Metering Program. Please
5	identify where, in	the evidence all costs and revenues are found. Please provide a
6	business case for t	his program.
7		
8	<b>RESPONSE:</b>	
9	The Suite Meterin	g Program is a component of THESL's normal revenue metering
10	business. THESL	has always provided individual metering of multi-unit buildings, as an
11	option for the buil	ding owner or developer. Recently, THESL's Suite Metering Program
12	was expanded to is	nclude a more compact, modern meter technology.
13		
14	THESL's Suite M	etering Program is designed to assist building owners, managers and
15	developers to insta	all individual suite metering in both new and existing buildings. To
16	support this progra	am, THESL has prepared brochures and posters describing the benefits
17	of suite metering,	and has made presentations to developers, property managers and
18	condominium boa	rds.
19		
20	THESL decided to	o outsource the installation of suite meters. Following the release and
21	evaluation of an R	FP, Trilliant was selected to provide meters and program management
22	and arrange for ins	stallation of the suite meters. Trilliant is also providing meter reading
23	and data managem	nent services.
24		

Toronto Hydro-Electric System Limited EB-2009-0139 Exhibit R1

Tab 4
Schedule 24

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- Expected revenues are included as part of customer load and revenue forecast as shown
- in Exhibit K1, Tab 1, Schedule 1. Budgeted costs are shown in Exhibit D1, Tab 7,
- Schedule 1, Table 2 and in Exhibit F1, Tab 7, Schedule 1, Table 1.

- 5 Since suite meters present an additional option to THESL's existing individual metering
- 6 program, and aren't considered to be a new business opportunity, a business plan was not
- 7 prepared as explained in Exhibit R1, Tab 4, Schedule 23.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 25

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	1	IN	JΠ	$\Gamma$ H	'R	R	O	G.	Δ'	$\Gamma C$	R	$\mathbf{V}$	25:
J	L	11	7 .		/ I.V		v	<b>\ I</b> I	_		, 17		40.

2 Reference(s): Exhibit F1, Tab 7, Schedule 5, page 4

3

- 4 The Customer Relationship Management Operating Budget is increasing by almost \$2
- 5 million in 2010. Please identify how much of that overall budget is related to the
- 6 introduction of TOU rates. How much was spent in 2009 related to the introduction of
- 7 TOU rates. How much of that budget is related to CDM and why are those costs not
- 8 recovered through the OPA?

9

- In 2010 \$1.4 million is related in the launching of TOU rates.
- In 2009 \$1.1 million was related to the introduction of TOU rates.
- 13 There are no CDM costs included in the budget.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 26

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATO	RY 26:						
2	<b>Reference(s):</b>	F2/T5/S1/p. 5						
3								
4	Please provide a de	etailed budget for the Finance Planning and Reporting group. Please						
5	provide the same level of detail for the years 2006-2010. Please include Board approved							
6	amounts for the year	ars 2008 and 2009.						
7								
8	<b>RESPONSE:</b>							
9	Contrary to the que	estion, the Board did not approve budget levels for specific activities in						
10	2008 and 2009. Ra	ather, the Board authorized an overall amount for controllable						
11	expenses.							
12								
13	See Appendix A of	f this Schedule for historical information.						

Toronto Hydro-Electric System Limited
EB-2009-0139
Exhibit R1
Tab 4
Schedule 26
Appendix A

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# Appendix A Finance Planning and Reporting (\$ millions)

	FY06 Actual		FY07 Actual		FY08 Actual		FY09 Bridge		FY10 EDR	
Payroll Costs		_		1.3		1.6		2.7		4.9
Labour Costs		-	-	0.0	-	0.1	_	0.9	_	0.7
Payroll Related Expenses		-		-		-		-		-
Payroll Related Allocations		-		-		-		-		-
Vehicle Costs and Fleet Charges		-		-		-		-		-
Vehicle Charges and Recoveries		-		-		-		-		-
Inventory and Direct Purchases		-		0.0		0.0		0.0		0.0
External Contract Services		-		0.2		0.3		0.1		2.3
EE9011		-		-		-		-		-
<b>Utilities and Communications</b>		-		0.0		0.0		0.0		0.0
Office Supplies and Postage		-		0.0	-	0.0		0.0		0.0
Employee Expenses		-		0.0		0.1		0.1		0.2
Rental and Leases		-		-		-		-		-
Other Support Costs		-		-		-		-	-	0.1
Total Taxes		-		-		-		-		-
<b>Total Before Allocations and Recoveries</b>		-		1.5		1.9		2.0		6.5
Total Usage Charges		-		0.2		0.1		0.1		0.3
Shared Service Allocations		-		-		-		-		-
Other Allocated Costs		-		-		-		-	-	2.1
Total Cost Recoveries		-		-		-		-		-
Total Customer Contributions		-		-		-		-		-
Operating Expenses		-		1.7		1.9		2.1		4.7

Exhibit R1 Tab 4 Schedule 27

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATO	RY 27:
2	Reference(s):	F2/T6/S1/p. 3
3		
4	Please provide a sc	chedule setting out a detailed budget for Treasury, Rates and
5	Regulatory Affairs	. Please include all regulatory expenses internal and external. Please
6	provide the same le	evel of detail for the years 2006-2010. How are the costs related to the
7	2010 rates proceed	ing recovered?
8		
9	<b>RESPONSE:</b>	
10	See Appendix A of	f this Schedule.
11		
12	Costs related to the	e 2010 rates proceeding are included in the forecast budget.

Toronto Hydro-Electric System Limited
EB-2009-0139
Exhibit R1
Tab 4
Schedule 27
Appendix A
Filed: 2009 Nov 30
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# Appendix A Treasury, Rates and Regulatory Affairs (\$ millions)

	Actua FY06	-	Actual FY07		Actual FY08	Bridge FY09	EDR FY10
Payroll Costs		\$	2.6	\$	2.8	\$ 3.0	\$ 3.1
Labour Costs		-\$	0.1	-\$	0.2	\$ -	\$ -
Vehicle Costs and Fleet Charges		\$	0.0	\$	0.0	\$ 0.0	\$ -
Vehicle Charges and Recoveries		\$	-	\$	-	\$ -	\$ -
Inventory and Direct Purchases		\$	0.0	\$	0.0	\$ -	\$ -
External Contract Services		\$	1.2	\$	1.0	\$ 1.1	\$ 3.0
Utilities and Communications		\$	0.0	\$	0.0	\$ 0.0	\$ 0.0
Office Supplies and Postage		\$	0.0	\$	0.0	\$ 0.0	\$ 0.0
Employee Expenses	N/A	\$	0.1	\$	0.1	\$ 0.1	\$ 0.1
Rental and Leases	N/A	\$	0.1	\$	0.0	\$ 0.1	\$ 0.1
Other Support Costs		\$	7.0	\$	5.6	\$ 6.7	\$ 7.2
Total Taxes		\$	-	\$	-	\$ -	\$ -
<b>Total Before Allocations and Recoveries</b>		\$	10.9	\$	9.3	\$ 11.1	\$ 13.6
Total Usage Charges		\$	0.4	\$	0.5	\$ 0.4	\$ 0.5
Shared Service Allocations		\$	-	\$	-	\$ -	\$ -
Other Allocated Costs		-\$	0.1	\$	-	\$ -	\$ -
Total Cost Recoveries		\$	-	\$	-	\$ -	\$ -
<b>Total Customer Contributions</b>		\$	-	\$	-	\$ -	\$ -
Operating Expenses	\$ 9.6	\$	11.3	\$	9.9	\$ 11.4	\$ 14.1

#### Notes

<sup>1. 2006</sup> historical amounts were obtained from previous rate filing (F2/T7/S1). Amounts for 2006 are not available in the format above due to changes in the structure of the organization.

Toronto Hydro-Electric System Limited

EB-2009-0139 Exhibit R1 Tab 4 Schedule 28

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATORY	28.
1	INTERNOGATORI	40.

2 **Reference(s): F2/T7/S1p. 2** 

3

- Please provide a detailed budget for the Legal Services Groups. Please provide the same
- level of detail for the years 2006-2010. Please include Board approved amounts for 2008
- 6 and 2009.

7

#### **RESPONSE:**

9 See Appendix A of this Schedule.

- 11 Contrary to the question, the Board did not approve budget levels for specific activities in
- 2008 and 2009. Rather, the Board authorized an overall amount for controllable
- 13 expenditures.

Toronto Hydro-Electric System Limited
EB-2009-0139
Exhibit R1
Tab 4
Schedule 28
Appendix A
Filed: 2009 Nov 30

Page 1 of 1

# Appendix A Legal Services Groups (\$ millions)

	Actual FY06		Actual FY07		Actual FY08		Bridge FY09	EDR FY10
Payroll Costs		\$	1.2	\$	1.4	\$	1.5	\$ 2.3
Labour Costs		\$	-	\$	-	\$	-	\$ -
Vehicle Costs and Fleet Charges		\$	-	\$	0.0	\$	-	\$ 0.0
Vehicle Charges and Recoveries		\$	-	\$	0.0	\$	0.0	\$ -
Inventory and Direct Purchases		\$	0.0	\$	0.0	\$	0.0	\$ 0.0
External Contract Services		\$	0.9	\$	1.2	\$	0.9	\$ 1.4
Utilities and Communications		\$	0.0	\$	0.0	\$	0.0	\$ 0.0
Office Supplies and Postage		\$	0.0	\$	0.0	\$	0.0	\$ 0.0
Employee Expenses	N/A	\$	0.0	\$	0.1	\$	0.1	\$ 0.1
Rental and Leases	N/A	\$	-	\$	0.0	\$	-	\$ -
Other Support Costs		-\$	0.0	-\$	0.0	-\$	0.0	\$ 0.0
Total Taxes		\$	-	\$	-	\$	-	\$ -
<b>Total Before Allocations and Recoveries</b>		\$	2.1	\$	2.8	\$	2.5	\$ 3.8
Total Usage Charges		\$	0.3	\$	0.4	\$	0.3	\$ 0.5
Shared Service Allocations		\$	-	\$	-	\$	-	\$ -
Other Allocated Costs		\$	-	\$	-	\$	-	\$ -
Total Cost Recoveries		\$	-	\$	-	\$	-	\$ -
<b>Total Customer Contributions</b>		\$	-	\$	-	\$	-	\$ -
Operating Expenses	\$ 2.5	\$	2.4	\$	3.1	\$	2.8	\$ 4.3

#### Notes

1. Amounts for 2006 are not available in the format above due to changes in the structure of the organization.

EB-2009-0139 Exhibit R1 Tab 4 Schedule 29

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 INTERROGATOR	łΥ	29:
----------------	----	-----

2 Reference(s): F2/T/S1p. 2

3

- Please provide a detailed budget for the Marketing, Communications and Public Affairs
- 5 group. Please provide the same level of detail for the years 2006-2010. Please include
- 6 Board approved amounts for 2008 and 2009.

7

#### **RESPONSE:**

9 See Appendix A of this Schedule.

- 11 Contrary to the question, the Board did not approve budget levels for specific activities in
- 2008 and 2009. Rather, the Board authorizes an overall amount for controllable
- 13 expenditures.

Toronto Hydro-Electric System Limited
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Tab 4
Schedule 29
Appendix A
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# Appendix A Marketing, Communications and Public Affairs (\$ millions)

		Actual FY06	Actual FY07		Actual FY08		Bridge FY09		EDR FY10
Payroll Costs		\$	1.7	\$	1.8	\$	1.9	\$	2.7
Labour Costs		-\$	0.3	-\$	0.3	-\$	0.5	-\$	0.6
Vehicle Costs and Fleet Charges		\$	-	\$	-	\$	-	\$	0.0
Vehicle Charges and Recoveries		\$	0.0	\$	0.0	\$	0.0	\$	-
Inventory and Direct Purchases		-\$	0.0	\$	0.0	\$	0.0	\$	0.0
External Contract Services		\$	1.9	\$	2.4	\$	2.3	\$	2.2
<b>Utilities and Communications</b>		\$	0.0	\$	0.0	\$	0.0	\$	0.0
Office Supplies and Postage		\$	0.2	\$	0.2	\$	0.2	\$	0.2
Employee Expenses		\$	0.0	\$	0.0	\$	0.0	\$	0.1
Rental and Leases	N/A	\$	-	\$	=	\$	-	\$	-
Other Support Costs	N/A	\$	0.0	\$	0.0	\$	0.0	\$	0.0
Total Taxes		\$	-	\$	-	\$	-	\$	-
<b>Total Before Allocations and Recoveries</b>		\$	3.6	\$	4.1	\$	3.9	\$	4.6
Total Usage Charges		\$	0.3	\$	0.3	\$	0.2	\$	0.3
Shared Service Allocations		\$	-	\$	-	\$	-	\$	-
Other Allocated Costs		-\$	0.0	\$	-	\$	-	\$	-
Total Cost Recoveries		\$	-	\$	-	\$	-	\$	-
<b>Total Customer Contributions</b>		\$	-	\$	-	\$	-	\$	-
Operating Expenses		\$	3.9	\$	4.4	\$	4.1	\$	4.9
Less: Donations		\$	-	\$	0.1	\$	0.1	\$	0.5
Operating Expenses - As Filed	\$	3.8 \$	3.9	\$	4.3	\$	4.0	\$	4.4

#### Notes

<sup>1.</sup> Amounts for 2006 are not available in the format above due to changes in the structure of the organization.

Toronto Hydro-Electric System Limited EB-2009-0139

Exhibit R1 Tab 4 Schedule 30

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

	INITI	7DD	$\Omega C \lambda$	TOD	XY 30:
l		1KK	UЛTА	LUR	i y Su:

2 **Reference(s):** C1/T6/S1/p. 3

3

- 4 Please provide a copy of the ten-year plan presented to the OEB in THESL's last rates
- 5 proceeding (2008-2009). Please explain, in detail, how the updated 10 year plan has
- 6 changed since the previous plan was developed.

7

#### 8 **RESPONSE**:

- 9 Please refer to Exhibit D1, Tab 8, Schedule 10 of THESL's last rate case (EB-2007-0680)
- for the previous ten-year plan. Exhibit Q1, Tab 2, Schedule 1 presents THESL's
- Sustaining Capital Progress Report, and Exhibit D1, Tab 8, Schedule 10 is THESL's
- revised ten-year plan. Material changes to the ten-year plan are described on page 6, and
- details by portfolio are listed in Appendix A on page 43 of the revised plan ten-year plan.

Toronto Hydro-Electric System Limited

EB-2009-0139 Exhibit R1 Tab 4 Schedule 31

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERF	OCA	TODV	21.
1	INIEKE	ATIII	IUKY	

2 **Reference(s): C2/T2/S2/p. 3** 

3

- 4 Please recast Table 1, Capital Cost Facilities Baseline and include 2008 and 2009 Board
- 5 Approved amounts.

6

#### 7 **RESPONSE:**

- 8 The requested information does not exist since there are no Board-approved amounts at
- 9 this level of detail.

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### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 32:**

2 **Reference(s):** C2/T3/S2/p. 3

3

- THESL has a 2010 budget for "Emerging Portfolios" of \$45 million. Please explain what
- is meant by Emerging Portfolios and provide a detailed break-down of the \$45 million
- 6 budget.

7

#### **RESPONSE:**

- 9 In addition to required operational investments forming part of THESL's regular capital
- program, a number of emerging requirements arising from recent events and government
- initiatives are presented at Exhibit D1, Tab 9 of the Application. The material costs
- captured in the category "Emerging Portfolios" in the Total Materials Cost table as
- outlined in Exhibit C2-Tab 3-Schedule 2 support these projects.

14

Below is a break-down of those material costs, by project:

#### 16 Material Costs (\$ millions)

Emerging Requirements	Key Materials	2010 Test
Transit City & Standardization	Transformers, Scada Switches, Poles, Cable	27.3
Downtown Contingency	UG Cable, Transformers, Switches	13.0
FESI 7 / WPF	Fuses	2.7
Smart Grid Operations	Transformer Monitors, Switches	2.0
TOTAL		45.0

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Exhibit R1
Tab 4
Schedule 33

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 ]	IN	IT	E	RR	0	GA	TO	RY	33:

2 **Reference(s):** C2/T3/S3/p. 9

3

- 4 The Civil Construction budget of External Service Costs is almost doubling from a \$46.4
- 5 million budget in 2009 to a \$89.5 million budget in 2010. The evidence states that the
- 6 main causes are new portfolios required for externally initiated plant relocations and
- 7 downtown contingency activities and increased civil construction to support the higher
- 8 sustaining capital program. Please provide a detailed break-down of this budget and
- 9 provide a more detailed rationale for this level of spending.

10

11

#### **RESPONSE:**

- The detailed \$89.5 million budget in 2010 for Civil Construction costs (broken down by
- 13 Category and Portfolio) is shown in the table below.

Toronto Hydro-Electric System Limited

EB-2009-0139 Exhibit R1 Tab 4 Schedule 33

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

Category	IOP Portfolio	Description	Total Civil Construction Capital Costs (\$M)
	Direct Buried	Direct Buried Upgrade	\$8.4
	Direct Buried	Direct Buried Rebuild	\$31.7
Llimban	UG Rehab	UG Rehab - Upgrade	\$2.9
Higher	UG Rehab	UG Rehab - Rebuild	\$10.3
Sustaining Capital Program	Overhead	Overhead - 27.6 voltage Conversion	\$3.0
riogiaili	Overhead	Overhead - 13.8 voltage Conversion	\$1.4
	Network	Network Transformer Upgrade	\$0.2
	Customer Connections	Residential Service	\$0.6
	Customer Connections	Commercial Service	\$8.7
New Portfolios	Customer Connections	Residential Subdivision	\$0.2
new Portionos	Reactive UG	Reactive UG - Rebuild	\$0.3
	Reactive OH	Reactive OH - Rebuild	\$0.1
	Standardization	Standardization	\$1.9
Downtown	Downtown Contingency	Downtown Contingency	\$14.4
Contingency			
Externally Initiated Plant Contingency	City + Utility Relocation	City + Utility Relocation	\$5.4
TOTAL:			\$89.5

- 2 The increased budget for New Portfolios, Downtown Contingency, and Externally
- 3 Initiated Plant Contingency is necessary to support customer demands and emerging
- 4 requirements, as well as the continuing effort to modernize infrastructure.

Witness Panel(s): 3 and 4

Toronto Hydro-Electric System Limited EB-2009-0139

Exhibit R1 Tab 4 Schedule 34

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 **INTERROGATORY 34:**
- 2 **Reference(s): C2/T4/S1/p. 3**

3

- 4 Please indicate how much THESL is spending in 2010 on "investigating plug-in hybrid
- 5 electric vehicles and electric vehicles".

6

#### 7 **RESPONSE:**

8 No specific funds are currently identified for PHEV / EV studies.

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1	INTERROGATORY 35:
2	Reference(s): Exhibit D1, Tab 7, Schedule 1, page 9
3	
4	Please provide one schedule setting out the total expenditures, by year, both capital and
5	operating, that have been spent on the smart meter program since its inception. This will
6	include, but not be limited to:
7	1) Total metering costs – both capital and operating costs
8	2) Total network costs (AMRC and WAN)
9	3) Total AMCC costs
10	4) Total costs related to MDM/R
11	5) Costs of any pilots
12	6) Cost for customer communication and education
13	7) Costs for incremental functionality
14	8) Any other costs considered part of the smart metering program
15	Please indicate if there are any costs included in rate base or the 2010 capital budget
16	related to the development and/or implementation of THESL's own MDM/R
17	
18	RESPONSE:
19	In the Board's decision on the Issues List for this proceeding, it stated at page 8:
20	
21	"Toronto Hydro argued that this entire section [i.e., Smart Meters] should be
22	removed because it is not seeking approval of either a smart meter budget, or to
23	clear any smart meter-related costs tracked in variance or deferral accounts.
24	
25	The Board accepts this change. The Board finds that if parties have questions or
26	concerns related to the smart meter evidence which Toronto Hydro has filed in the

Toronto Hydro-Electric System Limited EB-2009-0139 Exhibit R1

Exhibit R1 Tab 4 Schedule 35

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1	present application, these are subsumed under other issues already on the Issues
2	List."
3	
4	THESL declines to answer this interrogatory since it deals with matters that are out of
5	scope for this hearing. THESL expects and is fully prepared to present complete
6	evidence in this area and to answer all relevant interrogatories when it files for
7	disposition of the deferral account balance.

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1	INTERROGATOR	Y 36:
2	<b>Reference</b> (s):	D1/T7/S1/p.9
3		
4	Please recast Table 2	2 – Summary of Capital Budget to include Board approved and actual
5	numbers for the year	s 2006-2009.
6		
7	<b>RESPONSE:</b>	
8	Please find the 2006	-2007 actual capital numbers (Appendix A). The 2006 numbers were
9	not previously captu	red at the level of detail as presented in Exhibit D1, Tab 7, Schedule
10	1, Table 2, as the cat	egories were differently presented in 2006. Hence, the 2006
11	numbers have been r	remapped to match the categories as presented Exhibit D1, Tab 7,
12	Schedule 1, Table 2.	
13		
14	Board approved num	abers are not provided because, contrary to the question, the Board
15	did not approve budg	gets for specific capital portfolios in 2008 and 2009. Rather, the
16	Board authorized an	overall revenue requirement as a basis for establishing just and
17	reasonable rates. Ma	anagement then directed appropriate levels of capital spending in
18	specific areas based	on the actual circumstances and priorities experienced during the test
19	years.	

Toronto Hydro-Electric System Limited

Exhibit R1, Tab 4, Schedule 36, Appendix A

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Appendix A

Revised Table 2: Summary of Capital Budget (\$millions)

	2006 Historical	2007 Historical	2008 Historical	2009 Bridge	2010 Test
OPERATIONAL INVESTMENTS					
Sustaining Capital					
Underground Direct Buried	7.3	33	23.8	48.3	70.3
Underground Rehabilitation	33.1	35.7	38.2	33.7	36.3
Overhead	19	24.3	19.3	15.7	22
Network	5.6	9.9	4.7	4.8	5.7
Transformer Station	0.8	15.9	8.5	7.2	15.9
Municipal Substation Investment	6	6.2	8.3	6.3	6.8
Fotal Sustaining Capital	71.8	125	102.9	116	157
Reactive Work	11.1	15.6	19.3	13.8	22.5
Customer Connections	36.4	41.7	42.8	37.4	32.5
Customer Capital Contribution	-23.6	-27	-32.7	-21	-24.4
Asset Management			-4.9	1	2.8
Engineering Capital	21	20.7	26.4	27	31.2
AFUDC	1	3.4	2	2.6	4.4
Other	2.6	1.6	1	1	-
Total Operations	119.3	181	156.8	177.8	226
GENERAL PLANT			100.0		
Fleet &Equipment Services	6.2	9.2	7.9	9.9	11.4
Facilities	5.7	20	3.4	8.4	12.6
Other	4.9	4.2	0.3	2	4.4
Total GENERAL PLANT	16.8	33.4	11.6	20.3	28.4
CUSTOMER SERVICES					
Wholesale Metering	1.5	0	0	0.5	10.9
Suite Metering	0	0	0	1.8	2.4
Other	3.6	4.6	13.2	0.2	0.6
Total CUSTOMER SERVICES	5.1	4.6	13.2	2.5	13.9
Total INFORMATION TECHNOLOGY	15.2	20.4	24.1	27.8	33.3
otal OPERATIONAL INVESTMENTS	156.4	239.4	205.7	228.4	301.6
MERGING REQUIREMENTS					
Standardization			-	5.5	32.7
Downtown Contingency			-	-	31.3
FESI 7 / WPF			-	1.6	5.5
Smart Grid Operations			-	-	3
Externally Initiated Plant Relocations			-	-	27.8
Stations System Enhancements			-	-	15.2
Secondary Upgrade			-	-	6.5
Total EMERGING REQUIREMENTS				7.1	122
TOTAL CAPITAL	156.4	239.4	205.7	235.5	423.6
TOTAL BOARD APPROVED	153.4	note 1	230.4	240.2	

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1	INTERROGATO	RY 37:
2	<b>Reference</b> (s):	D1/T7/S1/p. 18
3		
4	The evidence states	that THESL has amended its infrastructure renewal plans to reflect
5	the Board's previou	is decisions in EB-2007-0680, and has incorporated refinements in its
6	asset condition asse	ssment and risk-based modeling to more effectively direct capital
7	investments. Please	e explain, specifically, how THESL has amended its renewal plans to
8	reflect the Board's	decision.
9		
10	<b>RESPONSE:</b>	
11	THESL amended it	s plans based on the Board's previous decisions in EB-2007-0680.
12	This had implicatio	ns on its spending alternatives, asset condition assessment
13	methodology, the u	se of risk-based modelling, and the resultant directed spending.
14		
15	Spending Alternativ	/es
16	• Insta	alled additional equipment such as fuses, switches, and animal guards
17	• More	e frequent asset cleaning
18	• Pilot	projects for injection of cables with silicone fluids
19	• Pilot	projects for directional boring
20	• Stati	on transformer life extension through the use of oil reclamation
21		
22	Refinements to Ass	et Condition Assessment
23	• Mor	e refined formulas are used to derive health indices
24	• High	ner and better granularity is achieved for circuit breakers; the
25	SCA	DAMATE category is added for switches.

Exhibit R1
Tab 4
Schedule 37

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1	<ul> <li>The granularity for underground cables is being increased from circuit-</li> </ul>
2	kms to segments
3	<ul> <li>For most asset categories, available condition data is provided for a higher</li> </ul>
4	percentage of assets
5	<ul> <li>Most of the health index calculations were consolidated into one</li> </ul>
6	application
7	Network asset inspection practices were modified to included additional
8	collection of end-of-life condition information
9	• Based on the above refinements, further deterioration can be seen in a
10	number of asset classes, such as underground cable and station power
11	transformers
12	
13	Risk Based Modelling
14	Better prioritization process into the Asset Investment Strategy Model
15	<ul> <li>Continued development of asset-centric modelling</li> </ul>
16	
17	Directed Spending
18	<ul> <li>Increased allocation of capital funding for underground cable and wood</li> </ul>
19	poles. Also, increased spending for oil reclamation for station power
20	transformers

Toronto Hydro-Electric System Limited EB-2009-0139

EB-2009-0139 Exhibit R1 Tab 4 Schedule 38

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	IN	TER	RO	GAT	ORY	38:
1			$\mathbf{x}$		$\mathbf{v}$	-

2 **Reference(s): D1/T8/S1/p. 15** 

3

- Please provide a detailed budget for Underground Direct Buried Capital Requirements.
- 5 Please include 2008 and 2009 Board approved numbers. For each proposed project
- 6 please provide the business case analysis.

7

#### **RESPONSE:**

- 9 The 2008 and 2009 detailed budgets for Underground Direct Buried Capital
- Requirements are detailed in the tables below.

- The Board did not approve any specific projects or amounts for 2008 and 2009. Rather
- the Board approved a total sustaining capital amount for these years.

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

Detailed Budget for 2008 and 2009 Underground Direct Buried Capital Requirements:

2008 Underground Direct Buried Capital Requirements					
Est Number	Project Description	IOP Work Type	Total Cost		
10709	DC_A08078 Cut Repair Restorations 2008	Demand Capital	\$4,400,000		
9848	E07323 Fundy Bay NA502M21 UG Rebuild	Planned Capital	\$5,621,860		
9630	E07358 DB@ Wickson NT47M3 UG Rebuild	Planned Capital	\$4,680,782		
9838	E07317 DB@ Murison NT47M3 UG Repl.	Planned Capital	\$4,334,860		
10871	E08118 Malvern NT47M1 UG Rebuild	Planned Capital	\$3,844,468		
10831	E08119 Sewells, McLevin, Morningside	Planned Capital	\$2,780,292		
9855	E07319 Wintermute NA502M21 UG Rebuild	Planned Capital	\$2,776,567		
10671	E08069 Design for 2009 Const.Project	Planned Capital	\$1,931,575		
12896	08 Apprentices Work - RC3110	Planned Capital	\$1,744,843		
9631	E07358 DB@ Wickson NT47M3 UG Rebuild	Planned Capital	\$1,530,697		
9839	E07317 DB@ Murison NT47M3 UG Repl.	Planned Capital	\$1,349,872		
10948	E08141 Hartleywood NT63M6 UG Rebuild	Planned Capital	\$1,307,635		
10872	E08118 Malvern NT47M1UG Repl	Planned Capital	\$1,293,331		
9856	E07319 Wintermute NA502M21 UG Rebuild	Planned Capital	\$1,232,582		
9726	E07355 Wild Briarway 51M6 UG repl	Planned Capital	\$762,561		
12978	Advance of 2009 Civil Work into 2008	Planned Capital	\$750,000		
4078	E08161 Military Trail YH-F1F3 Conversion	Planned Capital	\$320,333		
9172	E07354 Feeder NA502M21 Reconfiguration	Planned Capital	\$255,922		
11666	E08282 DB @ Parkway F. SS68F8 UG Replm't	Planned Capital	\$217,740		
12979	Advance of 2009 Civil Work into 2008	Planned Capital	\$750,000		
11444	W08268 Prue 35M5 UG DB Cable Rehab	Planned Capital	\$200,756		
Total:			\$42,086,676		

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1

2009 Und	2009 Underground Direct Buried Capital Requirements					
Est Number	Project Description	IOP Work Type	Total Costs			
14668	2009 CUT REPAIR RESTORATIONS DPE + DPW	Sustaining	\$2,600,000			
13857	HL - John Tabor NT47M3 UG Rehab (Phase2)	Sustaining	\$4,125,013			
14674	E07323 DB @FUNDY BAY NA502M21 REPLACEMEN	Sustaining	\$4,143,072			
13851	HL - John Tabor NT47M3 UG Rehab (Phase1)	Sustaining	\$3,612,887			
13118	E07315 Goldhawk ph1	Sustaining	\$3,267,723			
13119	E09245 Goldhawk NT63M12 UG Rebuild Ph 2	Sustaining	\$2,769,001			
11963	E09147 HL Design for 2010 Const.Proj	Sustaining	\$2,389,934			
14671	E07323 DB @FUNDY BAY NA502M21 REPLACEMEN	Sustaining	\$2,284,664			
14919	09 Apprentices Work - RC3110	Sustaining	\$2,284,489			
9849	E07323 Fundy Bay NA502M21 UG Rebuild-el	Sustaining	\$2,052,037			
14271	WINTERMUTE ELECTRICAL	Sustaining	\$1,439,011			
14942	HL Civil work 2010 advanced to 2009	Sustaining	\$1,295,000			
13746	E09308 HL - Goldhawk NT63M12 Rehab-Ph 4	Sustaining	\$704,251			
10949	E08141 Hartleywood NT63M6 UG Repl-Elect	Sustaining	\$388,464			
14765	E07212 Morningside NAR26M31,M36 ELECTRCL	Sustaining	\$504,733			
Total:			\$33,860,279			

2

7

- 3 A brief business case was submitted for each of the projects with an estimated cost over
- 4 \$500,000 in the 2007 EDR submission (reference EB-2007-0680, Exhibit D1, Tab 8,
- 5 Schedules 8-1 and 8-2). The 2008 and 2009 Underground Direct Buried projects were
- 6 primarily driven by:
  - The results of THESL's first external Asset Condition Assessment completed by Kinectrics in 2006.

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Exhibit R1 Tab 4 Schedule 38

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- An external study called "Evaluation of Medium Voltage Cable System of
   Toronto Hydro Electric System Limited" conducted by John Densley of AborLec
   Solutions Inc.
- An internal study called "Design Strategy for Underground Residential Rebuild
   Projects Business Case Summary" prepared by the Standard Design Practice
   Team on April 21, 2006.

Toronto Hydro-Electric System Limited

EB-2009-0139 Exhibit R1 Tab 4 Schedule 39

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1 INTERROGATORY 39	1	IN	TER	RO	$\mathbf{G}\mathbf{A}'$	ΓOR	Y 3	9:
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2 **Reference(s): D1/T8/S1/p. 28** 

3

- 4 Please provide a detailed budget for the Transformer Station Capital Investments. Please
- 5 include 2008 and 2009 Board approved numbers. For each proposed project please
- 6 provide the business case analysis.

7

#### 8 **RESPONSE**:

- 9 Please see the detailed budget presented in Exhibit R1, Tab 1, Schedule 63. The OEB's
- 10 EB-2007-0680 Decision established overall capital investment levels, but did not specify
- figures for individual portfolios. Therefore, no Board-approved numbers exist for
- 12 Transformer Station investments.

- Business case analyses for projects satisfying the materiality threshold may be found in
- Exhibit R1 Tab 8 Schedule 9-5.

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 40:**

2 Reference(s): D1/T8/S3-2/p. 9

3

- The evidence indicates that customer capital contributions are expected to be \$15 million
- for 2010. Please explain how THESL develops this forecast. For each year 2006-2009
- 6 please provide the forecast and actual customer capital contributions.

7

#### **RESPONSE:**

- 9 The forecast for the customer capital contributions is based on an 18-month historical
- trend of actual contributions. The trend data is adjusted for the impact of expected major
- projects and economic outlook.

12

13

- Forecast and actual customer capital contributions for 2006-2009 are provided in Table 1
- 14 below.

15

16

### **Table 1: Customer Capital Contributions (\$ millions)**

20	06	200	07	20	08		2009	
Budget	Actual	Budget	Actual	Budget	Actual	Budget	Forecast	YTD October Actual
22.0	23.6	19.6	27.0	23.0	32.7	19.8	18.4	16.2

Exhibit R1
Tab 4
Schedule 41

Filed: 2009 Nov 30 Page 1 of 2

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

ı IN	TERROGATORY 4	1:
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2 **Reference(s):** D1/T8/S6-2/p. 1

3

- The evidence indicates that THESL is currently reviewing it facilities strategy and is
- 5 investigating the potential to consolidate to one central operating location and one
- 6 administrative office. Please explain why given the plan to consolidate are the costs
- 7 increasing so significantly in 2010.

8

#### 9 **RESPONSE**:

- The revised strategy will require additional execution time. Based on a five- to seven-
- year execution timeline for the new strategy THESL will require additional investments
- to complete essential work to keep the properties useful to support operations.

- 14 2010 Facility Baseline budget of \$12.6M includes;
- \$0.8M Office Furniture replacement, Ongoing improvement of obsolete common area furnishing and equipment
- \$0.7M improvements at leased work centres, Modification to accommodate increased workforce (Program Management Office, EHS Office, Warehousing)
- \$5.0M improvements at 14 Carlton, modifications to address compliance issues, accommodate increased workforce and support operations
- \$0.4M improvements at 28 Underwriters, modifications to address obsolescence and provide additional capacity to address increased workforce (Trouble Response
- 23 Consolidation)
- \$2.3M improvements at 500 Commissioners, modifications to address obsolescence and provide additional capacity to address increased workforce
- \$2.0M improvements at Yonge, modifications to address obsolescence

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Exhibit R1 Tab 4 Schedule 41

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- \$0.1M improvements at 60 Eglinton, two major systems at this site which is the back up Control Room require replacement (Computer Room Fire Protection and Cooling
   Systems)
- \$1.1M improvements at Substations

- 6 Proposed budgets include, upgrading backup power systems at 500 Commissioners and at
- 7 14 Carlton, replacing fire protection systems to comply with legislation at 14 Carlton and
- at 5800 Yonge (Halon), upgrading passenger elevators at 14 Carlton, upgrading fire
- 9 suppression system 500 Commissioners, roof replacement at 5800 Yonge.

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 42:**

2 Reference(s): Exhibit D1, Tab 8, Schedule 7, page 3

3

- 4 Please provide a detailed breakdown of the \$2.4 million forecast for suite metering
- 5 capital. In addition, please provide a total budget, OM&A and capital for all costs related
- 6 to THESL's suite metering program.

7

8

#### **RESPONSE:**

The suite meter capital budget for 2010 includes:

10 11

12

13

Item	\$ million
Labour, Installation and Vehicles	0.4
Material and Contracts	2.0
Total	2.4

1415

The suite meter OM&A budget for 2010 is \$0.3 million.

### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 43:**

2 **Reference(s): D1/T8/S8-1** 

3

- 4 Please provide the IT&S Plan that was provided to the Board in EB-2007-0680. To the
- 5 extent those costs differ from the costs presented in Tabl1 Summary of Overall Capital
- 6 Expenses of IT-Enabled Programs please explain the reasons for the variances.

7

#### **RESPONSE:**

- 9 On May 15<sup>th</sup>, 2008, OEB released its decision with respect to the THESL filing EB-2007-
- 10 0680, establishing a total IT&S capital budget of \$48.3 M for the 2008 and 2009 years
- combined. This amounts to a reduction of \$6.6 M from the amounts requested for the
- two years. Based on the budget established by the OEB, IT&S reprioritized its portfolio
- of projects, resulting in several projects and/or deliverables being deferred to 2010. The
- revised 2010 budget request is now required to complete the original planned scope of
- these programs and deliver the stated benefits, as outlined in Exhibit D1, Tab 8, Schedule
- 16 8.
- Below is a breakdown by program that includes a table comparing the original IT&S
- Plan that was provided to the Board in EB-2007-0680 to the most recent filing EB-2009-
- 19 0139, followed by a cost variance explanation for each program.

20

21

# Business Intelligence – Data Warehouse, Analytics & Reporting

#### 22 Table 1: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	2.4	2.7	1.7	6.8
EB-2009-0139	2.4	2.4	2.0	6.9

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### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

2 Cost Variance Explanation:

- 3 The original scope of this program has not materially changed, and as such there are no
- 4 material changes to the overall program budget. The revised 2010 budget is required to
- 5 deliver on the full scope of the program and allow the overall stated benefits to be
- 6 realized.

1

7

# **8 Core Legacy Application Upgrades**

### 9 Table 2: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	0.5	2.6	6.4	9.4
EB-2009-0139	0.7	1.3	2.4	4.4

#### 11 Cost Variance Explanation:

- The original budget included an upgrade cost of \$5M to the existing THESL ERP system
- (Ellipse) for 2010. Due to IFRS requirements and evolving business needs, THESL has
- decided to revisit its ERP strategy. As such, further investments into the current ERP
- system were halted until the strategy is completed and a decision is reached.

#### **Customer Information System**

#### Table 3: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	9.7	6.6	0.3	16.6
EB-2009-0139	9.1	6.6	2.5	18.3

19

16

17

18

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 Cost Variance Explanation:
- 2 As stated in Exhibit D1, Tab 8, Schedule 8-4, THESL decided to delay the
- 3 implementation of the new CIS application in order to concentrate on the TOU billing
- implementation as a top priority in 2009. The cost variance shown in Table 3 is a result
- of the extra labour required due to this delay as well as the additional functionality to be
- 6 implemented including: security data encryption, interface to ODS, and enablement of
- 7 commercial and industrial functionality.

### 9 Customer Relationship Management

#### 10 Table 4: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	-	-	0.9	0.9
EB-2009-0139	-	-	0.9	0.9

#### 12 Cost Variance Explanation:

- As stated in the 2007 submission, EB-2007-0680, the Customer Relationship
- Management program will begin in 2010.

#### 16 Infrastructure Maintenance/Refresh

#### Table 5: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	4.3	3.6	3.7	11.6
EB-2009-0139	3.7	3.6	5.2	12.4

- 19 Cost Variance Explanation:
- The major changes between the EB-2007-0680 to the current EDR submission EB-2009-
- 21 0139 involve the Radio System Enhancement and the Firewall Enhancement initiatives.

18

8

11

15

1	
2	Radio System Enhancement: A full assessment of the radio system was concluded in
3	2009 that covered: 1) confined space underground system, 2) 900Mhz voice radio
4	system, and 3) the Data Radio system that serves critical communication and data feeds
5	for both the SCADA system and the control centre. The assessment showed that all three
6	systems are essential to SCADA and the control centre, in terms of safety and
7	functionality. The systems are more than 20 years old, the equipment is not supported
8	and parts are not available from vendors. The increased spend for 2010 is to overhaul
9	and upgrade the critical data radio system and the balance of the 900MHz system.
10	
11	Firewall Enhancements: This project was to address upgrades to the firewall and other
12	security requirements. Security reviews of the network were performed and identified a
13	number of key gaps to be addressed involving the security requirements of the three-tier
14	network, implementation of an in-depth network defence and improvements to the
15	perimeter defence. Toronto Hydro is part of the energy sector that belongs to the
16	National Security Infrastructure of Canada. Therefore, it is important to build an efficient
17	and effective network security platform.
18	
19	As a result of these reviews, and to address the noted vulnerabilities, the revised plan for
20	2010 includes the provision for the following activities: Application Firewall, Perimeter
21	Defence Integration, IDS/IPS Manager, Anti-virus Manager, Three-Tier Network
22	(continues into 2011), and Log Consolidation Control.
23	

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

### **Infrastructure Productivity**

#### **Table 6: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	2.4	2.5	1.4	6.2
EB-2009-0139	1.2	2.1	2.9	6.3

3

- 4 Cost Variance Explanation:
- 5 The original scope of this program has not materially changed, and as such there are no
- 6 material changes to the overall program budget. The revised 2010 budget is required to
- deliver on the full scope of the program and allow the overall stated benefits to be
- 8 realized.

9

#### 10 **Mobile Enablement**

#### 11 Table 7: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	2.5	0.5	0.5	3.5
EB-2009-0139	0.3	2.4	1.6	4.3

12

- 13 Cost Variance Explanation:
- In 2008, THESL decided to defer this initiative to 2009 in order to gain additional
- 15 efficiencies. The program scope was revisited later that year to better align with
- THESL's needs and strategy, and the revised business case was approved.

17

- The additional budget requirement of \$0.8 M was identified due to the need to procure
- additional software licenses and due to the decision to engage a qualified vendor to aid
- 20 THESL with the implementation of the solution.

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### **Operational Data Store (ODS)**

#### **Table 8: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	0.7	0.1	0.2	1.0
EB-2009-0139	0.6	0.9	0.2	1.6

3

- 4 Cost Variance Explanation:
- 5 The variance between the EB-2007-0680 and the current EDR submission EB-2009-0139
- is primarily due to the requirement to implement the Commercial and Industrial ("C&I")
- 7 functionality for TOU. In order to accomplish this implementation, our current ODS
- 8 must be upgraded to EIP Release 6.2 or higher. Toronto Hydro is in the process of
- 9 upgrading its existing ODS to Release 6.3 to support C&I and implement the same
- version of ODS as used by IESO. In 2009 the project's technical work will be completed.
- In 2010, user acceptance testing and implementation of the upgrade will be completed.

12

13

14

#### Security, Disaster Recovery & Business Continuity

#### Table 9: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	1.6	2.7	1.4	5.8
EB-2009-0139	2.4	1.9	2.3	6.6

- 16 Cost Variance Explanation:
- One of the key projects in the current Security Program is the implementation of Identity
- & Access Management ("IAM"). The solution as originally proposed was based upon
- the concept that the THESL requirement for multiple IAM environments could be hosted
- on a virtual platform. During the execution of the project, it was discovered that the
- software could not be supported on a virtual platform and therefore the environments had

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- to be hosted on physical servers resulting in increased project cost. The requirement for
- 2 additional network hardware, beyond what was originally anticipated, to properly deliver
- a High Availability solution also contributed to the increase in the program cost.

4

- 5 Also, in July 2009, a vulnerability was identified when a THC internet portal was
- 6 attacked by a malicious hacker. The cause of the incident was attributed to a flaw in the
- 7 registration processes and session management. The immediate threat was addressed
- 8 using a short-term solution, but the need for a more robust long-term solution was
- 9 identified. THESL decided to implement Customer Identity & Access Management
- 10 ("CIAM") functionality in order to better protect THC's external portals.

11

12

13

#### **Service Oriented Architecture**

### **Table 10: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	2.1	1.1	0.6	3.8
EB-2009-0139	1.5	1.0	0.5	3.1

14

15

- Cost Variance Explanation:
- The original plan provided an allocation of \$700K to support projects to properly
- integrate with the Service Oriented Architecture ("SOA") platform. However, it was
- determined that this funding would be better managed by the individual projects using
- these services and therefore a decision was made to reduce the SOA budget in 2010.
- 20 This has resulted in a number of smaller increases across several programs and projects to
- accommodate the requirements of adapting and integrating the individual project with the
- 22 SOA.

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

### **Support Area Applications**

### **Table 11: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	0.8	1.8	-	2.6
EB-2009-0139	0.7	1.0	2.0	3.8

3

- 4 Cost Variance Explanation:
- 5 The change in budget requirements for the Support Area Applications program can be
- 6 attributed to two significant changes:

7

- 8 An application Upgrade of Hyperion from version 3.5 to version 9.3 ("System 9")
- 9 together with its associated components including Hyperion Reports, Essbase and all
- existing business rules, interface, forms and reports was not in the 2007 EDR submission.
- This upgrade was required to address application version currency and performance
- 12 issues.

13

- 14 After the initial successful deployment of Clarity, the project and portfolio software
- system, within the IT&S division as originally planned, a new requirement was identified
- to roll it out to other business units that can leverage the success of the initial limited
- 17 deployment.

18

19

#### Web Enablement

#### 20 **Table 12: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	0.8	1.2	1.4	3.4
EB-2009-0139	1.2	1.1	1.9	4.2

#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 Cost Variance Explanation:
- The change in the budget needs of the Web Enablement Program is due to the
- 3 introduction of a few deliverables that were not in the original scope of the program as it
- 4 was defined in 2007:
- Customer Move Functionality on the web: providing a web-based front-end that customers can use to notify THESL of move-in / move-out transactions.
  - Outage Map: providing a web based interface that maps the outage area resulting in reduced call volume.

# 9

7

10

#### **Portfolio Contingency**

### 11 Table 13: Program Cost Comparison (\$M)

	2008	2009	2010	Total
EB-2007-0680	-	2.0	3.9	5.9
EB-2009-0139	-	-	0.3	0.3

#### 12

- 13 Cost Variance Explanation:
- As the understanding of various program requirements were further refined, the need for
- a large contingency diminished.

#### 16

17

18

#### SCADA Security, Governance and Operations

### **Table 14: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	-	-	-	-
EB-2009-0139	-	-	1.4	1.4

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 Cost Variance Explanation:
- 2 The SCADA Security, Governance and Operations program was not in the EB-2007-
- 3 0680 submission. Please refer to Exhibit D1 Tab 8 Schedule 8-15 for more details
- 4 regarding this initiative.

5

# **6** Smart Grid / Green Energy Act Enablement

#### **Table 15: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	-	-	-	-
EB-2009-0139	-	-	6.7	6.7

8

- 9 Cost Variance Explanation:
- The Smart Grid / Green Energy Act Enablement program was not in the EB-2007-0680
- submission. Please refer to Exhibit D1, Tab 8, Schedule 8-16 for more details regarding
- this initiative.

13

# **SAP Solution Implementation**

#### 15 **Table 15: Program Cost Comparison (\$M)**

	2008	2009	2010	Total
EB-2007-0680	-	-	-	-
EB-2009-0139	0.7	3.5	0.4	4.5

- 17 Cost Variance Explanation:
- The SAP Solution Implementation program was not in the EB-2007-0680 submission.
- Please refer to Exhibit D1, Tab 8, Schedule 8-14 for more details regarding this initiative.

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2 **Reference(s): D1/T8/S8-2** 

3

- With respect to the Business Intelligence Data Warehouse, Analytics and Reporting
- 5 Program, please quantify the expected benefits in 2010 and identify where those benefits
- 6 are reflected in the filing.

7

#### 8 **RESPONSE**:

- 9 As noted for the Business Intelligence Data Warehouse, Analytics and Reporting
- Program in Exhibit D1, Tab 8, Schedule 8-2, page 1, program benefits do not commence
- until 2011. A list of expected benefits starting in 2011 is shown on pages 1 and 2 of that
- 12 Schedule.

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### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

#### 1 **INTERROGATORY 45:**

2 **Reference(s): D1/T8/S8-4** 

3

- With respect to the Customer Information System Upgrade please provide the initial
- 5 detailed budget for the program. In addition, please provide the most recent actual
- 6 expenditures for 2008 and 2009 and the most updated budget for 2010 on the same basis.

7

#### **RESPONSE:**

- 9 The initial budget for the Customer Information System Upgrade program can be found
- below in Table 1. The most recent actual and future forecast of the Customer
- Information System Upgrade program can be found in Table 2.

12

13

### **Table 1: Customer Information System Initial Detailed Budget (\$ Millions)**

	2006-2007	2008	2009	2010	
	Budget	Budget	Budget	Budget	
Labour	1.58	5.90	6.61	0.30	14.40
Materials &					
Equipment	0.71	3.74	-	-	4.45
	2.30	9.65	6.61	0.30	18.86

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- **Table 2: Customer Information System Actual Cost to date + Most Recent Forecast**
- 2 (\$ Millions)

	2006-2007	2008	2009	2010	
	Actual	Actual	Actual	Budget	
			(as of		
			Oct31)		
			+ Forecast		
			(Nov & Dec)		
Labour	1.33	7.38	6.35	2.54	17.60
Materials &					
Equipment	0.33	1.74	0.81	-	2.88
	1.67	9.12	7.16	2.54	20.48

- 4 In summary:
- The overall original program budget was \$18.86 M.
- The most recent forecast (including actual costs) is \$20.48 M.
- The variance to original budget is 8.59%.

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	1	TN	JΊ	Γĸ	ìR	R	O	C	Δ 7	$\Gamma O$	R	$\mathbf{V}$	46:
J	ι.		<b>ال</b> ا	_	71	777	v	<b>\ I</b> I	_				т.,

2 **Reference(s): D1/T8/S8-6** 

3

- 4 Please provide a business case analysis for the Infrastructure Maintenance/Refresh
- 5 Program.

6

#### 7 **RESPONSE:**

- 8 The Infrastructure Maintenance/Refresh Program is comprised of the projects identified
- 9 in Exhibit D1, Tab 8, Schedule 8-6, Table 1. The forecast cost of the Infrastructure
- Maintenance program in 2010 is \$5.2M. As this program consists of projects necessary
- to support and sustain the THESL IT environment, this program is not expected to
- provide financial benefits and no business case was developed for the program. Instead,
- the component projects will provide other benefits, such as:
- 1. Reduced risk of obsolescence.
- 15 2. Reduced risk of failure across all systems.
- 3. Reduced software maintenance downtime.
- 4. Reduced maintenance costs on Radio System arrays.
- 5. Increased reliability and reduced reliance on manual process.
- 6. Improved data restore and recovery turnaround time.
- 7. Improved ability to prevent unauthorized access to THESL resources.

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGAT	ORY 47:
2	<b>Reference(s):</b>	D1/T8/S8-7
3		
4	Please provide a	business case analysis for the Infrastructure Productivity Program.
5		
6	<b>RESPONSE:</b>	
7	The Infrastructure	e Productivity Program is comprised of the projects identified in Exhibit
8	D1, Tab 8, Sched	lule 8-7, Table 1. While no business case was conducted at the program
9	level, the forecas	t cost of the program in 2010 is \$2.9M. Building on the progress
10	achieved in 2008	& 2009, the estimated quantified benefits over a ten-year period starting
11	in 2011are \$10.4	M.
12		
13	These quantifiable	le benefits are the results of:
14	• Reduc	ction costs for technical support due to reduced calls;
15	• Reduc	ction in incident handling time;
16	• Reduc	ction in the number of failed and installed with problem changes to
17	produ	ction;
18	• Cost a	avoidance to manage increased numbers of servers and environment;
19	• Reduc	ction in server maintenance and administration costs;
20	• Reduc	ction in licensing costs;
21	• Reduc	ction in labour and storage costs for database backup;
22	• Reduc	ction in labour costs for telecom moves, add and changes; and
23	• Reduc	ction in maintenance costs relating to increased competition with
24	indust	try standard technology.

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- In addition, there are also expected non-quantifiable benefits, such as:
- Better alignment with industry benchmarks;
- Better alignment with environmental direction to "green" datacentres;
- Improved security through better logging and comprehensive audit trails;
- Better integration of services with enterprise backup system allowing proper
- 6 incremental backups to occur without service interruption; and
- Cost savings due to improved application performance.

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## INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

- 1 **INTERROGATORY 48:**
- 2 **Reference(s): E1/T1/S1/p. 3**

3

- The evidence states that THESL will update the forecast debt costs closer to the
- 5 beginning of the Test Year. Please explain how THESL intends to develop the forecast
- 6 debt rate for the \$200 million debt issue expected in June 2010. In addition, please
- 7 indicate when the update will be provided.

8

#### 9 **RESPONSE**:

Please see response to Board Staff interrogatory #83.

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

	N/EDDOG / EOD	NT 40
1	INTERROGATOR	XY 49:
2	<b>Reference(s):</b>	D1/T8/S8-16
3		
4	The evidence states	that it is important to "upgrade the overall infrastructure (Network,
5	Systems etc.) and the	e security architecture, in order to ensure the new infrastructure
6	design is robust, sca	lable and capable of integrating new smart grid assets. It is also
7	expected that addition	onal integration between core systems will be required for the purpose
8	of realizing the full 1	potential of the Smart Grid's advanced analytics and decision-making
9	capabilities." Please	e explain to what extent THESL's strategy to transform and
10	modernize its IT ass	ets is being driven by its smart grid plan. What portion of the overall
11	IT capital budget for	2010 is related to smart grid investments?
12		
13	<b>RESPONSE:</b>	
14	The need to transfor	m and modernize IT assets is a key aspect of THESL's strategy. This
15	is reflected in the cu	rrent EDR submission EB-2009-0139, and is also consistent with the
16	IT requirements pres	sented in the previous EDR submission EB-2007-0680.
17		
18	However, Smart Gri	d has widened the perimeter of the network from the corporate
19	environment to the e	entire distribution grid. This has heightened the need for a robust
20	infrastructure design	that is scalable and secure, introducing various incremental
21	requirements. Those	e incremental requirements have been identified separately, and
22	accounted for under	the Smart Grid program as indicated in Exhibit D1, Tab 8, Schedule
23	8-16.	
24		
25	As is shown in Table	e 1 of Exhibit D1, Tab 8, Schedule 8-1, the Smart Grid investments

represent \$6.74M or about 20% of the overall IT Capital budget of \$33.35M for 2010.

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EB-2009-0139 Exhibit R1 Tab 4 Schedule 50

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1	INTERROGATORY	7 <b>50</b> :
2	<b>Reference</b> (s):	D1/T8/S8-16
3		
4	For all of the Smart G	rid projects listed in Table 1, please provide a business case
5	analysis.	
6		
7	<b>RESPONSE:</b>	
8	Although THESL has	performed preliminary business case analyses for the projects
9	listed in Table 1, the p	projects have not yet gone through an economic assessment, as
10	explicit benefits and o	costs have yet to be measured. The primary purpose of the
11	demonstration project	s is to learn about the technology, its impact on THESL operations,
12	and to collect informa	tion which will enable THESL to further evaluate the potentials of
13	project deployment.	
14		
15	The value proposition	and rationale for each of the 2010 initiatives are discussed in
16	Exhibit G1, Tab 1, Sc	hedule 3. Each project is fully aligned with the definition and
17	requirements of the G	EGEA, THESL's corporate strategy, and the Smart Grid objectives
18	as described in Exhib	it G1, Tab 1, Schedule 1, page 5.

Exhibit R1
Tab 4
Schedule 51

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATO	ORY 51:
2	<b>Reference</b> (s):	G1/T1/p. 11
3		
4	THESL has identi	fied \$9.7 million of capital and \$450,000 in operating costs to be spent
5	in 2010 on Smart	Grid Projects. Please explain, in detail, how THESL determined which
6	projects it would r	nove forward with in 2010. Please provide a business case analysis for
7	each Smart Grid p	roject. Please explain how the budget for each project was developed.
8		
9	<b>RESPONSE:</b>	
10	THESL has priori	tized its Smart Grid projects in the 25-year roadmap based on the
11	criteria indicated i	n Exhibit G1, Tab 1, Schedule 1, page 7, and determined specific
12	projects to move f	orward within 2010 based on the criteria indicated in page 10 of that
13	same schedule.	
14		
15	Each of the smart	grid projects has been subjected to a preliminary business case
16	analysis. THESL'	s efforts have been dedicated to actively exploring the needs of
17	developing the sm	art grid in compliance with provincial mandate and in meeting utility
18	and distributed gen	neration requirements. THESL also has a responsibility to explore, be
19	familiar with, and	apply new technologies considering the uniqueness of its customer
20	base and infrastruc	cture. However, the projects have not gone through an economic
21	assessment as exp	licit benefits and costs have yet to be measured. The primary purpose
22	of the demonstrati	on projects is to learn about the technology, its impact to THESL
23	operations, and to	collect information which will enable THESL to further evaluate the
24	potentials of proje	ct deployment.

Toronto Hydro-Electric System Limited EB-2009-0139 Exhibit R1

Exhibit R1 Tab 4 Schedule 51

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#### INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

The business case analyses for each of the 2010 initiatives are discussed in Exhibit G1,

Tab 1, Schedules 2 and 3. Each project is fully aligned with the definition and

3 requirements of the GEGEA, THESL's corporate strategy, and the smart grid objectives

as described in Exhibit G1, Tab 1, Schedule 1, page 5.

5

6 The budget for each project was developed by first determining a scope for the project

that would be appropriate and sufficient to demonstrate its benefits. Material and labour

8 cost requirements were then calculated.

9

12

10 IT requirements to support the implementation of the selected operations projects were

analyzed and IT infrastructure projects were initially formulated. These projects were

then grouped, optimized for schedule requirements, and reviewed to ensure alignment

with the technology plans according to the high level Smart Grid IT Strategy developed

by THESL with the support of a major consulting firm, to draw on their North American

and global expertise. Technology cost estimates were prepared corresponding to

hardware, software, and other requirements, and project labour was estimated between

internal, external, and consulting resources. Please refer to Table 1 in Exhibit R1, Tab 1,

Schedule 114 for additional detail on each project.

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Exhibit R1 Tab 4 Schedule 52

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# INTERROGATORIES OF CONSUMERS COUNCIL OF CANADA

1	INTERROGATO	PRY 52:
2	<b>Reference(s):</b>	G1/T1/p. 6
3		
4	Please provide TH	ESL's current estimate of the cost of its 3-year Smart Grid Plan.
5	Please explain how	v that budget was developed.
6		
7	<b>RESPONSE:</b>	
8	Please reference Ta	able 5: 2010 Smart Grid Projects – Operations, and Table 6: 2010
9	Smart Grid Project	s - Information Technology in Exhibit R1, Tab 1, Schedule 107 for the
10	near-term forecast	of the expenditure for each activity for 2010 through 2012. The
11	forecast assumes s	uccessful demonstration of the initiatives and that projects move into a
12	deployment phase	with continued legislative, regulatory, and market support, and omits
13	initiatives where en	nabling technologies are not yet available or sufficiently mature for
14	demonstration.	
15		
16	Working with a ma	ajor consulting firm to draw on their North American and global
17	expertise, the budg	get for each project was developed based on an appropriate scope for
18	the project that wo	uld be sufficient to demonstrate its benefits, and allow movement from
19	a study/pilot/demo	nstration to a deployment and support phase. Technology and
20	infrastructure plans	s were aligned with the THESL IT Smart Grid Strategy to support
21	these initiatives, ar	nd material and labour cost requirements were then calculated.