

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

### INTERROGATORY 1:

**Reference(s):** Exhibit C2/Tab 1/Schedule 5, page 5

Exhibit C2/Tab 1/Schedule 2, Appendix A

In the first reference, THESL states “In 2010, some 130 new employees will be hired into leadership, trades, technical and customer service positions, along with engaging contractors”.

In the second reference, the increase in the number of employees from the 2009 Bridge Year (1630 FTEs) to the 2010 Test Year (1785) is shown as 155.

Please complete the following table to show the number of employees by position title, the business units that will house the positions, the programs supported, and the cost to each business unit.

Position Title	Number of Positions	Business Unit	Program Supported	Cost \$
<b>Total</b>				

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1   **RESPONSE:**

2   The 155 new hires in 2010 Test Year will be employees of THESL for the foreseeable  
3   future. These employees are not being hired to work exclusively in support of a specific  
4   program. Over the course of their employment, they will be assigned to support a  
5   number of different programs and activities.

6

7   The table below identifies the breakdown of additional FTEs for 2010.

Position Category	FTEs	Amount
Executive	-	-
Managerial	1	216,501
Mgmt / Non-Union	56	7,608,114
Union	98	9,160,768
Total	155	16,985,383

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 2:**

**Reference(s):** Exhibit C2/Tab 1/Schedule 5, page 5

a)

THESL expects over 690 employees from its workforce to retire from 2009-2018.

THESL plans to manage the attrition issue by leveraging seasoned workers; replacing retiring employees; and increasing full-time complement in trades and technical jobs.

a) What percentage of 2008 retiring employees have been replaced in the same base position (with the same duties)?

b) How many retiring employees in 2008 and 2009 have not been replaced?

c) Is THESL required to complete a business case for approval for each position vacated by retirement to demonstrate the continued need for the position?

d) What percentage of vacated positions in 2008 due to retirement were assessed and recast to perform new duties in the same or other business units? What were the cost implications?

**RESPONSE:**

a) Fifty-six percent of retiring employees in 2008 have been replaced in the same base position.

b) Five retiring employees for the combined years of 2008 and 2009 have not been replaced.

c) Each position that is vacated by retirement and is subsequently requested to be filled requires the approval of the hiring Manager and the Vice President of the Division.

**INTERROGATORIES OF ASSOCIATION OF MAJOR  
POWER CONSUMERS IN ONTARIO**

- 1 d) Thirteen percent of 2008 replacement were re-cast. The cost implications were  
2 savings of approximately \$20K.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

1 **INTERROGATORY 3:**

2 **Reference(s):** **Exhibit C2/Tab 1/Schedule 5, page 5**

3

4 On page 5, THESL says “selective replenishment and augmenting of other jobs will be  
5 done to meet business needs as required in the normal course of business.....”

6 a) Please provide an explanation and provide an example to further explain what is  
7 meant by selective replenishment and augmenting of other jobs.

8 b) Is selective replenishment and augmenting of existing jobs undertaken as part of  
9 attrition planning?

10

11 **RESPONSE:**

12 a) “Selective replenishment and augmenting of other jobs” refers to hiring that may be  
13 done as required by the business other than hiring that is specifically planned to deal  
14 with retirements and the capital plan. This type of hiring could include replacement  
15 of employees who leave THESL (other than through retirement) or result from  
16 changes in the business that require additional or new skills sets. An example could  
17 be new regulations such as International Financial Reporting Standards in which  
18 more extensive and complex reporting requirements could impact the number of  
19 FTEs or types of positions in Finance.

20

21 b) Replenishing and augmenting are taken into account to the extent that these changes  
22 are known in advance and can be incorporated into the plan.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 4:**

**Reference(s):** Exhibit C2/Tab 1/Schedule 5, page 7

THESL states that from 2009 to 2010, approximately 50 technical apprentices, in design and engineering, will be hired who will be deployed to the distribution asset renewal plan or Smart Grid.

The technical apprenticeship lasts four and-a-half years. What specific activities related to Smart Grid does THESL anticipate these apprentices will be undertaking in 2013 to 2015?

**RESPONSE:**

THESL anticipates that technical apprentices will be deployed to partake into two key areas:

- 1) Construction, operation, and maintenance of new infrastructure to support the integration of distributed generation; and
- 2) Construction, operation, and maintenance of Smart Grid equipment, including intelligent sensors and controls.

The anticipated initiatives in relation to Smart Grid from 2013 to 2015 can be found in Exhibit G1, Tab 1, Schedule 1.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

### **INTERROGATORY 5:**

**Reference(s): Exhibit F2/Tab 9/Schedule 1, page 6**

THESL states that IT&S will be supporting the new and substantial requests for future investment in Smart Grid technologies and infrastructure; initiatives that will assist THESL in developing aspects of the GEGEA as well as financial implementation to support IFRS. An increase of four full time employees is planned to support these new technologies.

- a) What percentage of the four employees in 2010 will support the Smart Grid initiative and what is the basis for the allocation?
- b) What positions will be hired and what is the annual cost of each position including benefits?

### **RESPONSE:**

a) The percentage of the four new employees that will support Smart Grid initiative is 30%. The allocation is based on two employees spending 40%, and two employees spending 20% of their other capacity on Smart Grid related activities. As stated in Exhibit F2, Tab 9, Schedule 1, pages 5 and 6, these four new employees will help cover other needs beyond Smart Grid.

b) The positions and fully-burdened annual costs for the four employees are as follows:

- Radio System Consultant – \$133K (40% Smart Grid)
- Cyber Security Consultant – \$133K (20% Smart Grid)
- PMO Client Consultant – \$133K (20% Smart Grid)
- BI Senior Consultant – \$141K (40% Smart Grid)

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 6:**

**Reference(s): Exhibit F2/Tab 9/Schedule 1, page 6**

IT&S intends to convert 14 contractors to full-time positions.

- a) How many of the 14 full-time positions in 2010 will support the Smart Grid initiative?
- b) What are the full-time positions (job classification) that will be put in place to support Smart Grid?
- c) What specific activities will each position undertake and for which business units?
- d) What are the annual cost implications by position to convert a contractor to a full-time position taking into account employee benefits and pension costs?

**RESPONSE:**

- a) These are not net new positions, they are positions that have been performed by contractors for a number of years supporting IT operations. It is, therefore, not expected that any of the 14 converted full-time positions will directly support the Smart Grid initiative, although it is likely that everyone in the organization will be, to one degree or another, affected by the Smart Grid program.
- b) As the Smart Grid program is still in its infancy, it was deemed premature to allocate full-time positions to support the program. As the program shifts from the demonstration-pilot phase to the implementation phase, it will then be appropriate to create the business case for putting full-time positions in place to support this strategic long-term initiative.



## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

- 1 c) They will be performing the same activities as they have been in the past.  
2  
3 d) The annual cost implications to convert contractors to full-time, by position are  
4 shown in the table below:

No of positions	Position	Average Cost as Contractor (\$ thousands)	Fully burdened Cost of FTE (\$ thousands)	Variance
4	Senior Infrastructure Technical Consultant	154	141	12
2	Senior Consultant	149	141	8
6	Systems Consultant	146	133	12
1	Client Consultant	143	133	10
1	Governance/Risk Administrator	86	71	15
<b>14</b>	<b>Total</b>	<b>2,019</b>	<b>1,848</b>	<b>171</b>

- 5  
6 In addition to the financial benefits of converting contractors to full time, it is also  
7 important to consider the reduction in the legal and tax risks of extended contracts, as  
8 these contractors can be deemed THESL employees by Revenue Canada.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

1 **INTERROGATORY 7:**

2 **Reference(s):** **Exhibit F2/Tab 9/Schedule 1, page 7**

3

4 THESL indicates that educational and training costs will increase in 2010 to provide  
5 training for the expanding technology that IT&S will support with new initiatives such as  
6 smart grid and related technologies.

7

8 Please provide the Educational and Training costs for the 2008 Historical, 2009 Bridge  
9 and 2010 Test Year.

10

11 **RESPONSE:**

12 The table below shows the Educational and Training cost for the 2008 Historical, 2009  
13 Bridge and 2010 Test Year.

RC	2008 Historical	2009 Bridge	2010 Test Year	Total
Total IT&S	279,683	287,850	498,472	1,066,006

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

### INTERROGATORY 8:

**Reference(s):** Exhibit D1 /Tab 8/Schedule 6-1, page 2

The Total Fleet and Equipment Services Budget increases in 2010 by 15.55% or \$1.5 M.

THESL submits that it plans to add 8 vehicles in 2010.

a) Please provide a list of the vehicles to be purchased in 2010?

b) Please identify the staff positions that these vehicles will be supporting and the specific programs they will be supporting.

c) Does THESL plan to purchase Photo Hybrid Electric Vehicles (PHEV) or biodiesel fuel trucks in 2010?

### RESPONSE:

a) See Table 1A below.

Table 1 A
Crane truck
Crane truck
Power Cable Reel Trailer
Power Cable Reel Trailer
UG Truck (Cube Van)
UG Truck (Cube Van)
Van mounted bucket truck
Van mounted bucket truck

b) These vehicles will be supporting staff in the Distribution Projects – East, Distribution Projects – West, and Stations Departments.

**INTERROGATORIES OF ASSOCIATION OF MAJOR  
POWER CONSUMERS IN ONTARIO**

- 1 c) THESL will continue to purchase diesel trucks and in turn use up to 20% biodiesel  
2 content to fuel these vehicles. There are no current plans to purchase PHEV vehicles  
3 in 2010.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1    **INTERROGATORY 9:**

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

3                                **Exhibit D1, Tab 7, Schedule 1, page 9, Table 1**

4  
5    THESL submits at Exhibit F1/Tab 7/Schedule 2, page 1 that by the end of 2010, 80  
6    percent of Large Commercial and Industrial services will have Smart Meters.

7  
8    In Table 1 at Exhibit D1, Tab 7, Schedule 1, page 9, THESL forecasts smart meter  
9    installations from prior years, 2008, 2009, 2010 and 2011.

10  
11   Please reproduce the table by adding a new row to this table to show the historical and  
12   forecast smart meter installations for the Large User rate class ( >5000 kW).

13  
14   **RESPONSE:**

Units	Prior Years	2008	2009	2010	2011	Totals
Residential and General Service < 50 kW	397,409	154,711	59,500	61,057	20,000	692,677
General Service 50 to 200 kW	800	1,116	3,000	4,507	1,900	9,416
General Service >200 kW	2,600	1,000	1,400	1,400	600	7,000
Large Users >5000 kW	0	0	0	0	0	0
Total Smart Meter units	400,809	156,827	63,900	66,964	22,500	711,000

15

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

- 1 All 47 THESL customers in the Large User (>5000 kW) rate class had remotely read
- 2 interval meters before the Smart Meter Initiative began, and are not included in the Smart
- 3 Meter Initiative.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

### INTERROGATORY 10:

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

THESL submits that in 2010, \$0.4 million is budgeted under Other Metering Capital to replace interval meters currently installed at approximately 2,500 of THESL's largest customers' facilities, and meter test shop equipment.

a) Will all 2500 interval meters be replaced in 2010? If yes, please provide a table to show the number of meter replacements and cost by relevant customer class.

b) If no to a) please complete the following table by relevant customer class (including the Large Use class) to show the duration of the program and annual costs.

Customer Class	Number of Interval Meters Replaced in Prior Years	Cost of replacement in Prior years (\$)	Number of Interval Meter Replacements in 2010	Cost of replacement in 2010 (\$)	Number of Interval Meter Replacements in Future Years	Cost of replacement in Future Years
<b>Total</b>						

### RESPONSE:

a) No, meters for THESL's largest customers will not all be replaced in 2010.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1  
2 b) Meters for these types of customers are replaced either every six years or every ten  
3 years on an ongoing basis to comply with Measurement Canada requirements. The  
4 following table was generated based on seal expiry years.  
5

Customer Class	Number of Interval Meters Replaced in Prior Years	Cost of replacement in Prior years (\$ ,000)	Number of Interval Meter Replacements in 2010	Cost of replacement in 2010 (\$ ,000)	Number of Interval Meter Replacements in Future Years	Cost of replacement in Future Years (\$ ,000)
50-1000 kW, Interval Meter	167	171	179	184	1,988	2,041
1000-5000 kW	25	26	48	49	586	601
Over 5000 kW (Large Users)	3	3	10	10	88	90
<b>Total</b>	<b>195</b>	<b>200</b>	<b>237</b>	<b>243</b>	<b>2,662</b>	<b>2,731</b>



## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 11:**

**Reference(s):**       **Exhibit G1/Tab 1/Schedule 1, page 10**  
                              **Exhibit G1/Tab18/Schedule 1, page 11, Table 2**  
                              **Exhibit G1/Tab18/Schedule 1, page 12, Table 3**

On page 10 of Exhibit G1/Tab1/Schedule 1, THESL indicates that the 2010 projects are derived from the three year plan of the smart grid roadmap.

Please reproduce Table 2 and Table 3 to include the expenditures anticipated in years 2011 and 2012 to illustrate the three year roadmap for THESL's Smart Grid Plan in more detail.

**RESPONSE:**

Please refer to Exhibit R1, Tab 1, Schedule 107 – Tables 5 and 6 for the forecasted expenditures anticipated in years 2011 and 2012 for the Smart Grid Projects – Operations and Smart Grid Projects – Information Technology respectively.

Those tables provide a near term forecast of the expenditure for each activity for 2010 and preliminary forecasts for 2011 and 2012. These forecasts assume successful demonstration of the initiatives and that projects move into a deployment phase with continuation of legislative, regulatory, and market driving forces, and omits initiatives where enabling technologies are not yet available or mature for demonstration.

The costs for 2011 and 2012 are preliminary and will be reassessed over time.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 12:**

**Reference(s):** Exhibit G1/Tab 1/Schedule 1, page 2

THESL states that its smart grid plan is driven in part by key activities such as the City of Toronto's Change is in the Air: Clean Air, Climate Change and Sustainable Energy Action Plan.

a) What specific elements of the City's Change is in the Air plan is driving THESL's Smart Grid Plan?

b) Since the release of the Green Energy and Green Economy Act, 2009 has THESL met with City of Toronto staff to discuss its Smart Grid Plan and integration with activities related to the City's Change is in the Air Plan? If so, please provide the dates, minutes and agreed upon outcomes of these meetings.

c) Has THESL established any partnerships between the City of Toronto and others to implement its Smart Grid Plan? If so, please provide details on the partnerships and identify any potential cost savings.

**RESPONSE:**

a) The City's commitment towards renewable energy, reduction in greenhouse gas emissions, energy conservation and efficiency, and sustainable transportation are among the significant considerations which will assist in the development of THESL's Smart Grid Plan.

b) Toronto Hydro staff has not met with the City of Toronto staff to discuss THESL's Smart Grid Plan. These issues have been discussed informally in the course of other meetings but there are no minutes or agreed upon outcomes.

**INTERROGATORIES OF ASSOCIATION OF MAJOR  
POWER CONSUMERS IN ONTARIO**

1

2 c) THESL has not yet established any partnerships with the City of Toronto and others  
3 to implement its Smart Grid Plan. However, THESL has been and will coordinate  
4 with the City of Toronto as well as other distributors and transmitters with regard to  
5 Smart Grid initiatives.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

### INTERROGATORY 13:

**Reference(s):** Exhibit G1/Tab 1/Schedule 1, page 3

Exhibit G1/Tab 1/Schedule 1, page 6

THESL states that it has been “proactively defining and planning for its Smart Grid since 2006.”

In the evidence, THESL states that “A long term road map was developed to provide a clear path with actionable programs and projects to show how THESL can transition from the current state to achieving the smart grid vision.”

Please complete the following table to provide a summary of the activities completed since 2006 to build the Smart Grid to its current state, and for each year show the capital and operating expenditures.

Project	Description	2006		2007		2008		2009	
		Cap	Op	Cap	Op	Cap	Op	Cap	Op

### RESPONSE:

The following table summarizes the activities completed since 2006 to develop the Smart Grid to its current state, in \$000s. The amounts in this table represent an estimate of the THESL staff time and conference expenses for these activities.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1

Project	Description	2006		2007		2008		2009	
		Cap	Op	Cap	Op	Cap	Op	Cap	Op
Industry Involvement	Forums, conferences and meetings		1				49		24
Smart Grid Vision and Roadmap	Vision and roadmap development		10		33		26		104
Smart Grid Planning	Preliminary planning and design								342

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

### INTERROGATORY 14:

**Reference(s):** Exhibit G1/Tab 1/Schedule 1, page 6

Under Strategic Principles for Deployment, THESL states that through an in-depth understanding of the smart grid requirements and state of the industry, three strategic principles were developed to guide the implementation of the smart grid.

- a) Has THESL undertaken a “best practices scan” of local and global activities related to Smart Grid requirements and state of the industry to inform THESL’s Smart Grid Plan in the current application.
- b) If yes to a) please identify and describe the three most relevant studies/projects and how the lessons learned/results of these studies were applied to THESL’s Smart Grid Plan. Please provide links to the relevant studies.

### RESPONSE:

- a) Yes, THESL has undertaken a best practices scan of local and global activities related to Smart Grid requirements and state of the industry to inform THESL’s Smart Grid Plan.

- b) The three most relevant studies/projects that were applied to THESL’s Smart Grid Plan are as follows.

(1) *Enabling Tomorrow’s Electricity System*, Report of the Ontario Smart Grid Forum, 2009

[http://www.ieso.ca/imoweb/pubs/smart\\_grid/Smart\\_Grid\\_Forum-Report.pdf](http://www.ieso.ca/imoweb/pubs/smart_grid/Smart_Grid_Forum-Report.pdf)

Through participating at the Ontario Smart Grid Forum and contributing towards the writing of this report, THESL aligned its Plan with Ontario’s vision of the

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1 Smart Grid. The report also informed THESL of the key components of Smart  
2 Grid, including consumer technologies, distribution, distributed energy resources,  
3 transmission, communications, electric vehicles, and with regards to innovation  
4 and the economy.

5  
6 (2) *Smart Grid: Enabler of the New Energy Economy*, A Report by The Electricity  
7 Advisory Committee, 2008

8 ([www.oe.energy.gov/DocumentsandMedia/final-smart-grid-report.pdf](http://www.oe.energy.gov/DocumentsandMedia/final-smart-grid-report.pdf))

9 This report informed THESL regarding the definition, value proposition,  
10 challenges, and opportunities of the Smart Grid, according to the Electricity  
11 Advisory Committee's advice to the U.S. Department of Energy.

12  
13 (3) *Electric Distribution Utility Roadmap, Phase II: Common Infrastructure*, CEA  
14 Technologies Inc., 2008

15 (<http://www.ceati.com/publication-details?publicationid=5962>)

16 This report informed THESL regarding key technologies for various customer  
17 densities, communication requirements, need for integration and standardization,  
18 and benefits of the Smart Grid.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 15:**

**Reference(s):**        **Exhibit G1/Tab 1/Schedule 1, page 7**

THESL's Smart Grid Plans (three year, three-to- ten year, and 25 year plans) were based on the following criteria: necessity to deliver on government policy and ability to generate short term results; customer needs and expectations; technology trends and readiness; and feasibility and capacity to execute, both from a financial and a skills availability perspective.

- a) Please describe the stakeholder consultations undertaken by THESL in the past to assess customer needs and expectations that were used to inform its Smart Grid Plans.
- b) What stakeholder consultation activities on the Smart Grid Plan or other GEA initiatives are planned for 2010 and beyond?

**RESPONSE:**

- a) THESL has assessed customer needs and expectations through its Project Rebuild, Conservation and Demand Management, and smart meter programs.
- b) THESL plans to engage stakeholders through discussions with the City of Toronto, direct communication with customers, community outreach, and advertising programs.



## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

1 **INTERROGATORY 16:**

2 **Reference(s):** **Exhibit G1/Tab 1/Schedule 1, page 7**

3

4 THESL has indicated that the selected demonstration area is located in North York and  
5 the area was selected due to factors such as reliability levels, equipment and smart meters  
6 installed, and customer diversity.

7

8 Is the Large User class represented in the selected demonstration area?

9

10 **RESPONSE:**

11 Yes, the Large User class are represented in the selected demonstration area.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

1 **INTERROGATORY 17:**

2 **Reference(s):** **Exhibit G1/Tab 1/Schedule 1, page 12 & 13**

3

4 In Table 2 THESL lists the 2010 Smart Grid projects related to Operations and in Table 3  
5 THESL lists 2010 Smart Grid projects related to Information Technology.

6

7 Please add a column to each table ranking the projects in order of priority and include an  
8 explanation for the ranking.

9

10 **RESPONSE:**

11

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1     **Table 1: 2010 Smart Grid Projects – Operations**

Project	Description	Capital Cost (\$000s)	Operating Cost (\$000s)	Ranking
Feeder Automation	Intelligent fault recovery on distribution switches	2,680		3
Secondary Network Automation	Microprocessor relays and SCADA communications in the secondary network	115		6
Transformer Smart Metering	Smart meters installed on distribution transformers	184		1
Power Line Monitoring	Monitors installed on overhead line conductors	41		4
Submersible Vault Monitoring	Monitors installed in submersible transformer vaults	10		5
Environmental Protection	Studies and demonstrations to support distributed generation and plug-in vehicles, and in developing effective customer energy management programs		450	2

3

4     The ranking of these projects is according to the criteria described in Exhibit G1, Tab 1,  
5     Schedule 1, page 7.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1 **Table 2: 2010 Smart Grid Projects – Information Technology**

Project	Description	Capital Cost (\$000s)	Ranking
Customer Portals Pilot <ul style="list-style-type: none"> <li>Customer Display Integration - Pilot</li> <li>Web Energy Portal</li> <li>OMS Integration - Customer Portal</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of customer displays (pilot project) and integration with other corporate systems</li> <li>Update the customer portal with additional functionality to support energy management</li> <li>Integrate OMS information with the customer portal</li> </ul>	948	6
Smart Grid Metering Pilot <ul style="list-style-type: none"> <li>Smart Meter Connect / Disconnect Pilot</li> <li>Smart Meter - Outage Identification - Pilot</li> <li>Network Meters Integration - Pilot</li> <li>Network Monitoring Integration - Pilot</li> </ul>	<ul style="list-style-type: none"> <li>Pilot the functionality to remotely connect / disconnect smart meters</li> <li>Pilot the functionality to utilize smart meters for the purpose of outage identification (last gasp function)</li> <li>Pilot the integration to new network meters (transformer meters)</li> <li>Pilot the integration to new network monitoring devices (power line monitoring devices, vault monitoring devices)</li> </ul>	421	5
Integration Architecture and Design	Design and implement the infrastructure required in support of integrating Smart Grid hardware and applications.	880	1
Access Network - Pilot	Deployment of a pilot wireless network in a selected area of Toronto	1248	2

3

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

Project	Description	Capital Cost (\$000s)	Ranking
Internal Network Readiness	Internal Network upgrade required in support of Smart Grid devices and applications	1480	3
Smart Grid Network Security	Changes to the security infrastructure and processes in support of the implementation of the smart grid.	1764	4

1

2 The higher ranked projects are those which establish the infrastructure and architectural  
3 foundations upon which the balance of the Smart Grid initiatives are based. This is  
4 reflected in the top four rated projects that address the scalability of the solution, the  
5 security of the implemented network, and the readiness of the environment and the  
6 devices.

7

8 The two lowest-ranked projects are ranked to ensure that the technology and devices  
9 deliver the expected benefits and support the Smart Grid information flows and  
10 processes.

## **INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO**

**INTERROGATORY 18:**

**Reference(s):** Exhibit G1/Tab 1/Schedule 2, page 10

THESL states that its smart grid plan is driven in part by key activities such as the Advanced Feed in Tariff (FIT).

Please provide a summary of the projects in THESL's franchise area that are driven by FIT projects by type, location and size, as well as supporting information or analysis to support the project uptake that THESL anticipates.

**RESPONSE:**

The projects in Exhibit G1, Tab 1, Schedule 2 all consider and contribute towards the connection of distributed generation under the Advanced Feed in Tariff ("FIT") program. A summary of each of these projects are provided in the Schedule. These projects are intended to better monitor and operate the network in the presence of distributed generation, irrespective of type and size, within a particular location or network topology (e.g., overhead, underground, secondary network, etc.).

As of November 18, 2009, the Ontario Power Authority has received 669 MicroFIT applications province-wide since program launch on October 1st, 2009. Of the 669 applications, 72 are in THESL's service territory. There are no applications for FIT at the moment, only MicroFIT. THESL will continue to keep abreast of the degree of uptake for FIT applications and respond with appropriate smart grid solutions to facilitate the connection of distributed generation.

## INTERROGATORIES OF ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

1 **INTERROGATORY 19:**

2 **Reference(s):** Exhibit G1/Tab 1/Schedule 2, pages 10-13

3 On pages 10 to 12, THESL provides a brief description of the Environmental  
4 Sustainment Project and a general overview of the initiatives that are planned or being  
5 considered. On page 13 THESL summarizes the project costs in Table 6 at \$450,000.

6  
7 Please provide a detailed list of the projects/studies and expenditures in 2010 that make  
8 up the \$450,000 and include the party that will be undertaking the study (i.e., THESL  
9 staff or external consultants).

10 **RESPONSE:**

11 The Environmental Sustainment initiative includes the following four main studies.  
12 Since the economic analysis on project requirements has yet to be made, the total budget  
13 is allocated proportionally to each study as follows:

14

Study	Budget (\$000s)	Participation
Smart Grid Planning Guidelines	112.5	THESL staff and external consultants
Smart Homes	112.5	THESL staff and external consultants
Distributed Generation	112.5	THESL staff and external consultants
Plug-in Electric or Hybrid Electric Vehicle	112.5	THESL staff and external consultants

**INTERROGATORIES OF ASSOCIATION OF MAJOR  
POWER CONSUMERS IN ONTARIO**

1 **INTERROGATORY 20:**

2 **Reference(s):** **Exhibit G1/Tab 1/Schedule 3, page 1**

3

4 In the evidence, THESL describes the Customer Portals Pilot Project that includes  
5 Customer Display Integration, Web Energy Portal and Outage Management System  
6 Integration.

7

8 Please indicate the customer classes to which this project applies.

9

10 **RESPONSE:**

11 The Customer Portals Pilot Project applies to all customer classes.