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

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
PO Box 2319
2300 Yonge St, 27th floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Toronto Hydro-Electric System Limited's ("THESL")
2011 Electricity Distribution Rate Application
OEB File No. EB-2010-0142**

THESL received interrogatories on its Cost of Service Study for Individually Metered Suites in Multi-Unit Residential Buildings ("Cost of Service Study"), filed December 1, 2010, from the Smart Sub-Metering Working Group and Vulnerable Energy Consumers Coalition. Enclosed are two sets of THESL's responses to these interrogatories.

THESL also received interrogatories from Energy Probe Research Foundation ("Energy Probe"), which do not refer to the Cost of Service Study. THESL understands point 1 on page 3 of the Board's Procedural Order No. 3, to allow Board Staff and intervenors opportunity to request additional information specific only to THESL's Cost of Service Study, and not a complete new round of interrogatories. THESL will, however endeavor to provide responses to Energy Probe's interrogatories at the technical conference on January 24, 2011.

It is THESL's intention to offer a separate Panel at the hearing (Panel 6) to address its Cost of Service Study for Individually Metered Suites in Multi-Unit Residential Buildings.

Please contact me if you have any questions.

Yours truly,

[original signed by]

Glen A. Winn
Manager
Regulatory Applications & Compliance

:GAW/acc

cc: J. Mark Rodger, Counsel for THESL
Intervenors of Record for EB-2010-0142

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 1 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 Please file, in Excel format, the Cost of Service Study for individually metered suites in
7 multi-unit residential buildings showing the formulas, inputs, and assumptions used in the
8 model.
9

10 **RESPONSE:**

11 THESL’s Cost of Service Study uses the Board’s Cost Allocation Model. This model has
12 been specifically designed by the Board to “roll-up” detail and removes formulas prior to
13 filing. Any party can obtain the working model without LDC specific data from the
14 Board’s website to see the model formulas and logic. The excel sheets provided in the
15 filed material contain the input data and assumptions used (see sheets I1 to I9).

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 2 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 On page 2 of the Cost of Service Study, it states that: “Based on information from
7 THESL management, a determination was made of the number of smaller multi-unit
8 residential buildings served through secondary infrastructure, and on that basis an
9 estimate was made of the cost of secondary lines that should be allocated to the SMSC.”
10 Please provide the number of buildings that were assumed to be served through
11 secondary infrastructure and the total number of buildings served by THESL that are
12 included in the suite-metered sub-class.
13

14 **RESPONSE:**

15 The number of buildings that were assumed to be served through secondary infrastructure
16 is 1,030, out of a total 3,456 buildings that are in the suite-metered sub-class.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 3 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 On page 10 of the Cost of Service Study it states that: “Once a population load shape had
7 been computed, it was returned to THESL staff, who normalized it for weather and
8 provided the weather-normalized load shape to BDR.” Please provide details of the
9 weather normalization methodology used, including the equations estimated and the data
10 used.
11

12 **RESPONSE:**

13 Please see the response to VECC Interrogatory 49 part b) for a description of the
14 normalization methodology. The data used and the equations estimated are provided in
15 the attached excel file (filename: R1_Tab10_Sch16.xls).

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 4 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 On page 20 of the Cost of Service Study it states that: “The larger multi-unit residential
7 buildings could have their own transformers or be fed from THESL-owned transformers.
8 Residential rates do not reflect the issue of customer-owned transformers. If the building
9 has a customer-owned transformer, a credit is applied to a General Service account
10 associated with the building.” On Page 21, the Cost of Service Study states: “To the
11 degree that buildings with customers in the SMSC are served at primary voltage, they
12 have been excluded from an allocation of line transformer costs.”

- 13 a) Please provide a table showing the proportion of SMSC customers for whom there
14 are costs associated with (i) transformer and secondary costs, (ii) transformer but no
15 secondary costs, (iii) secondary but no transformer costs, and (iv) neither transformer
16 nor secondary costs.
- 17 b) Please confirm that THESL-owned meters are always downstream of the transformer.
- 18 c) Please explain in detail the reason for not allocating secondary costs to multi-unit
19 residential buildings where THESL owns the meter and the meters are downstream of
20 the transformers.
- 21 d) Please detail THESL’s practice in respect of the transformation credit. How is it
22 calculated and applied? Does THESL agree that in the case of condominiums, the
23 credit benefits the condominium corporation and by extension the unit owners who
24 are ultimately responsible to pay THESL’s General Service account?

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **RESPONSE:**

2 a) The information requested is not readily available. As described in the Cost of
3 Service Study, estimates were made based on a professional judgement of the
4 percentages of secondary and line transformation required by each of the SMSC and
5 NSMSC. It was estimated that 30% of the SMSC require secondary and 44% of the
6 SMSC require line transformation for the purposes of allocating those costs.

7

8 b) THESL's current installation standard is that THESL-owned meters are installed
9 downstream of the transformer. At some older installations, the THESL meters are
10 upstream of the transformer.

11

12 c) Whether secondary costs should be allocated is dependent on the voltage at which the
13 customers are served by THESL. The larger multi-unit residential buildings which
14 house SMSCs have total loads of a size that are served by THESL at primary voltage,
15 so they will not incur secondary costs. The smaller multi-unit residential buildings
16 are served at lower voltage, so they will be allocated secondary costs. The relevant
17 section of the report is provided below for ease of reference:

18

19 **“Secondary Lines** – This is the most critical component in
20 distinguishing the costs of service for the SMSC from the NSMSC.
21 The distribution configuration for a large multi-unit residential
22 building, whether bulk metered or suite metered from the LDC's point
23 of view, is very different from the NSMSCs in that the multi-unit
24 residential building is generally fed from the primary circuits. THESL
25 supplies power to multi-residential buildings at high voltage (as would
26 be the case for large commercial and institutional buildings), whereas

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 for other residential customers the voltage is stepped down and the
2 customer receives supply through secondary lines at lower voltage. As
3 a result the cost of the secondary capital and maintenance do not apply
4 to the large multi-unit buildings.

5
6 However, the smaller buildings included in the SMSC are similar in
7 their requirements to single dwellings and to smaller General Service
8 customers, and may be served by the secondary circuits.”

9
10 d) The Transformer Ownership Allowance is given to customers that provide their own
11 transformation. The allowance is intended to compensate the customers for cost
12 incurred in providing and maintaining their own transformers. The allowance is
13 calculated as a utility avoided cost and the rate is applied to the customers’ bills as a
14 credit per kW. In the case of condominiums, the transformer ownership allowance is
15 computed on the basis of the total load (both common and individual suite) of the
16 building, and the amount of the credit is applied to the building’s general service
17 account. A benefit is provided to the condominium corporation, and by extension to
18 the suite owners in that this reduction to the general service account reduces costs that
19 must be recovered on some basis from the suite owners.

20
21 In the Cost Allocation Model, the revenue for suite-metered customers is at
22 residential rates, which do not include a transformer ownership allowance. The
23 allocation of transformer costs has been adjusted to reflect the fact that some suite-
24 metered buildings have customer-owned transformers.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 5 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 On page 25, Table 5.2 of the Cost of Service Study, the allocated Distribution and
7 General Administration expenses to SMSC are substantially lower than costs allocated to
8 NSMSC. Please confirm that these are fully allocated costs and not directly attributable
9 incremental costs.
10

11 **RESPONSE:**

12 The Distribution and General Administration expenses to the SMSC are fully-allocated
13 costs. The allocation of General Expenses is based on the weighted allocation of
14 Distribution and Customer expenses. Since SMSCs attract a lower per-customer
15 allocation of Distribution costs, the sub-class will also attract a lower per-customer
16 allocation of General costs. Since the per-customer allocated Distribution cost to SMSC
17 is only 40 percent (\$71/\$28) of the per-customer allocation to NSMSC, and the allocation
18 of the Customer expenses is approximately the same for both sub-classes (\$44/\$45), the
19 resultant General allocation of \$52/\$31 reflects this methodology.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 6 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 On page 25, Table 5.2 of the Cost of Service Study, the Depreciation and Amortization
7 costs for Suite-Metered is less than half than for Non-Suite Metered. Please confirm that
8 this is the result of the difference in the allocation of transformation and secondary lines
9 to the SMSC and NSMSC. If there are other significant factors, please identify them.
10

11 **RESPONSE:**

12 Confirmed. The difference is primarily the result of the difference in the allocation of
13 transformation and secondary lines to the SMSC and NSMSC.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 7 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 On page 6, of the Cost of Service Study it states that: “The population of the SMSC was
7 thus identified as consisting, in 2009, of 119,947 customers,...” Please confirm the
8 number of customers in this group for 2009 that are suite metered as a result of THESL’s
9 suite metering program.
10

11 **RESPONSE:**

12 Table 2 on page 5 of Exhibit D1, Tab 8, Schedule 7 shows total installations in 2008 and
13 2009 of 3,889 and 5,534 respectively, for a total of 9,423. As noted in the footnote to the
14 table, there is normally a lag between installation and the date the suite holder becomes a
15 customer. However, this number reasonably represents the number of customers suite-
16 metered in 2009 as a result of THESL’s suite metering program.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 8 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 Please provide detailed meter costs for the Quadlogic meter. This information can be
7 provided subject to confidentiality. The costs should be broken down by capital cost per
8 suite and installation cost per suite for the Quadlogic systems installed in 2009.
9

10 **RESPONSE:**

11 The information requested in this interrogatory is highly sensitive commercially. THESL
12 is developing this information and will file it subject to the Board’s confidentiality
13 guidelines to be available only to the Board, Board Staff, and to intervenor counsel
14 signing the confidentiality undertaking.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 9 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 THESL’s pre-filed evidence indicates that 5,534 suite meters were installed in 2009 (D1,
7 T8, S7, page 5, Table 2) and that the suite metering program had a capital budget (actual)
8 of \$3.3 million (D1, T7, S1, Table 2). This works out to a cost of \$596.32 per meter
9 (\$3.3 million divided by 5,534). Please explain how the \$297 cost used in the Cost of
10 Service Study is appropriate.
11

12 **RESPONSE:**

13 The \$3.3 million capital budget will not correlate directly to the number of installed units.
14 Since most of the jobs take part in at least two calendar years, and many buildings have
15 occupancies that start in one year but finish the next, there is no direct matching of an
16 annual cost to an annual install rate. Costs that are included in the \$3.3 million that are
17 not directly attributable to the number of installed meters include:

- 18 • Installation costs that would be incurred to install meters purchased in the
19 previous year, as part of a previous budget
- 20 • Consignment stock, that sits at Trilliant for use in short notice requirements
- 21 • Meters purchased that may not be installed until the following year (THESL
22 installation schedules are dependent on builder/contractor schedules, and often get
23 deferred if construction falls behind schedule).

24
25 Notwithstanding the above, the per-meter value calculated above is also categorically not
26 directly comparable to the value of \$297 shown on page 17 of the Study (and in Table

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

- 1 4.5). As described in the response to VECC Interrogatory 52 part b), the \$297 results
- 2 from applying the meter allocation factors to the entire balance in USoA account 1860 –
- 3 Meters. The allocation factor takes into account the costs of all the different types of
- 4 meters for each class.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 10 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)

5
6 Table 4.5, Account #1860 “Meters” allocated \$35.65 million to the Residential Suite
7 Metered Class. Please provide a breakdown of all of the costs by type and amount that
8 have been included in this figure. For example, if this figure includes conventional
9 mechanical meters or meters similar to those used in THESL’s Smart Meter Program
10 (hereinafter “Smart Meters”), please itemize and indicate the costs allocated to these
11 types of meters.

12

13 **RESPONSE:**

14 The allocation factors do not distinguish the various sub-accounts. The amount is simply
15 derived by taking the total of Account 1860 and multiplying this amount by the allocation
16 factor determined in I7.1 Meter Capital. The Weighted Meter Capital is 18.1% for the
17 SMSC.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 11 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 Please provide and compare the load shapes for suite metered customers that are served
7 by Quadlogic (or similar type) meters installed with multi-residential customers that are
8 served through regular mechanical meters or Smart Meters.
9

10 **RESPONSE:**

11 THESL does not have a complete set of data for the Quadlogic metered customers for the
12 study year (2009). However, analyses of data collected from some suites indicates that
13 there is little, if any, difference in load shape between Quadlogic and conventionally
14 metered customers.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 12 – SECOND ROUND:**

2 **Reference(s):** *Cost of Service Study for Individually Metered Suites in*
3 *Multi-Unit Residential Buildings*, prepared by BDR, dated
4 November 29, 2010 (the “Cost of Service Study”)
5

6 With respect to the suite-metered sub-class please confirm that the following categories
7 of customers have been included in this sub-class and provide the number of customers
8 and costs for:

- 9 a) Customers in bulk metered buildings that have been converted to individually
10 metered units with standard mechanical residential meters and/or with Smart Meters
11 (i.e., not the Quadlogic type used by THESL as part of its Suite Meter Program);
12 b) Customers in individually metered units that have been converted from standard
13 mechanical residential meters to Smart Meters;
14 c) Customers of new buildings with individually metered units that are served utilizing
15 Smart Meters installed initially (i.e., conversion not required);
16 d) Customers in multi-unit buildings that continue to be served by standard mechanical
17 meters.
18

19 **RESPONSE:**

20 THESL confirms that all of the customers described are included in the SMSC in the
21 study.
22

- 23 a) THESL has converted four bulk metered buildings to individual metering using non-
24 Quadlogic type smart meters. Approximately 400 units were converted at these
25 buildings, at an estimated cost of \$155 per unit.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

- 1 b) To date, THESL has installed approximately 113,000 smart meters at individually
2 metered units as part of the smart meter implementation plan, and is in the process of
3 determining the cost for these installations.
4
- 5 c) THESL does not have this data available, but the number of newly constructed
6 buildings that were initially metered using smart meters is very low (less than 1,000
7 units).
8
- 9 d) Currently, approximately 2,500 customers in multi-unit buildings continue to be
10 served by conventional meters. To date, no cost has been incurred for either the
11 smart meter implementation plan or suite meter program.

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 **INTERROGATORY 13 – SECOND ROUND:**

2 **Reference(s):** **Exhibit D1, Tab 8, Schedule 7, page 5, Table 2**
3 **and the Cost of Service Study**
4

5 THESL's evidence is that it installed 3,889 smart suite meters in 2008, and 5,534 in
6 2009, for a total of 9,423. THESL is seeking approval for a \$2.6 million capital
7 investment in suite meters, for 2011, which relates to the installation of Quadlogic
8 electronic metering systems installed primarily by a third party services provider at no
9 cost to a new condominium developer or the owner of an existing building that wishes to
10 convert from a bulk metered configuration. These meters and costs are the suite metering
11 program which was the subject of the SSMWG's involvement in THESL's 2010 rate case
12 (EB-2009-0139) and which were taken to hearing. The SSMWG submitted and adduced
13 evidence to the effect that these suite metering program customers were being cross-
14 subsidized by other THESL residential rate class customers. The concerns about cross-
15 subsidization were clearly directed only at the customers of THESL's suite metering
16 program, which totalled 9,423, as of the end of 2009.

17

18 The cost allocation study ordered by the Board stated the following:

19 "For the reasons that follow the Board finds that THESL should undertake
20 a cost allocation study related to its provision of suite metering services.

21 The study shall include an analysis of the implications of creating and
22 maintaining a separate rate class for those customers served in this
23 manner. The Board is of the opinion that the potential for cross-
24 subsidization is ongoing and that there may be merit in the establishment
25 of a separate rate class for multi unit-resident customers that are served
26 directly by THESL through its suite metering provision. This should be

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 filed as part of the next cost of service application, which THESL intends
2 to file later this year, but in any event no later than six months from the
3 date of this Decision.

4 ...

5 The Board believes that continual delay is not useful. It is significant that
6 the Board recently completed an extensive compliance proceeding against
7 THESL [EB-2009-0308 (January 27, 2010)] which, amongst other things,
8 required THESL to alter its Conditions of Service and to make it clear that
9 condominium developers and unit-holders are able to choose between
10 THESL as a suite metering supplier and a smart sub-metering regime that
11 includes competing suppliers for these services. In other words, the Board
12 has clearly stated that a utility does not hold a monopoly for individual
13 metering in multi-unit buildings. It would defeat the purpose of that
14 exercise to allow cross-subsidization, (if it exists), to exert a negative
15 impact on competition.”

16

17 It is clear from both the position of the parties, the evidence adduced, and the Decision of
18 the Board that THESL was required to undertake a cost allocation study comparing the
19 costs to serve THESL’s suite metering program customers to the costs to serve other
20 residential rate class customers. The Cost of Service Study prepared by BDR instead
21 compares a suite metered class of multi-unit buildings which consists of almost 120,000
22 units, more than 90 percent of which are not suite-metering program customers.

23 a) Please recast the definition of the suite metered sub-class for the purposes of the
24 cost allocation study to include only those 9,423 customers which were customers
25 of THESL’s suite metering program as of the end of 2009. Please take those
26 customers that are removed from the suite metered sub-class definition in the Cost

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

- 1 of Service Study for the purposes of this interrogatory, and add them to the
2 residential net of suite metered customer class, and redo the cost allocation study
3 using the Board's approved methodologies.
- 4 b) Please provide, in Excel format, this revised cost of service study showing the
5 formulas, inputs and assumptions used in the model.
- 6 c) Please provide a breakdown of all of the capital costs incurred in respect of the
7 primary and secondary infrastructure required (excluding the Quadlogic metering
8 systems) to serve the 5,534 suite meter customers added in 2009. For clarity, this
9 request includes all upstream connection, expansion and/or reinforcement costs
10 incurred and any costs incurred by a developer or building owner for expansion
11 facilities that were subsequently transferred (or where the transfer is pending) to
12 THESL. Please confirm that these costs have not been reduced by any expansion
13 deposit collected by THESL which may be returnable to the developer(s) or
14 owner(s) in question.

15

16 **RESPONSE:**

17 THESL declines this interrogatory on the basis that it does not accept the premise of the
18 interrogatory and on the basis that the information requested could not be produced
19 within the timeline directed by the Board for responding to interrogatories.

20

21 THESL disputes the premise of the question, which is that the cost allocation study
22 undertaken and filed by THESL does not meet the requirements of the Board's directive.
23 It does meet those requirements. The Board's directive clearly refers to multi-residential
24 buildings either served or potentially served by THESL through its suite metering
25 program, as distinct from being served as bulk-metered commercial customers. The
26 Board has defined the term 'suite metering' and the meaning of 'multi-residential' is

INTERROGATORIES OF SMART SUB-METERING WORKING GROUP

1 clear in this context; it must refer to buildings that at least have the potential to be served
2 either under bulk metering or suite metering arrangements.

3

4 It is not open now to the SSMWG to redefine the Board's direction to THESL or to
5 change the accepted meanings of terms to suit its own purposes.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 48 – SECOND ROUND:**

2 **Reference(s):** i) **Cost of Service Study for Individually Metered Suites in Multi-**
3 **Unit Residential Buildings (BDR Report), page 6**

4
5 a) Please explain how the pro-ration of the billed consumption to derive annualized use was
6 performed (i.e., was the pro-ration done over the entire year of just relative to the use in
7 the billing periods bracketing the calendar year?).

8
9 **RESPONSE:**

10 Billing Data by meter reading dates from all suite metered accounts was retrieved for the
11 year 2009. Average daily consumption was calculated by dividing the Total Metered
12 consumption by the number of days between the first meter reading date and the last
13 meter reading date in the retrieved period. The average daily consumption for the 2009
14 billing periods was then pro-rated over 365 days to provide a more accurate estimate for
15 the 2009 annual consumption.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 49 – SECOND ROUND:**

2 **Reference(s):** **BDR Report, pages 8-11**

3

4 a) Please confirm the definition of “weather normal” (i.e., years included and average HDD
5 and CDD values) as used by Hydro One Networks for purposes of determining THES’s
6 overall Residential Hourly Load Curve.

7 b) Please describe how THES weather normalized the hourly load data for the Suite-
8 Metered sub-class, including the definition of “weather normal” (i.e., years included and
9 average HDD and CDD values).

10 c) If the HDD and CDD values reported in parts (a) and (b) are different, please provide the
11 following:

- 12 • A schedule that sets out the various CP and NCP values for the Suite-Metered sub-
13 class using each set of values.
- 14 • A schedule that sets out the various CP and NCP values for the (residual) non-Suite-
15 Metered sub-class using each set of values.

16

17 **RESPONSE:**

18 a) The CP and NCP statistics determined by Hydro One for THESL’s overall residential
19 hourly load profile were based on a normalized annual residential load provided for
20 THESL’s 2008-2010 rate filing. The normalization was based on average heating
21 and cooling degree days measured over the period 1996-2005. Average annual HDD
22 and CDD (both measured on an 18 degree balance point basis) for that period were
23 3768 and 329 respectively.

24

25 b) To derive the normalized load profile for the Suite-Metered class, THESL utilized
26 2009 hourly load information for the MURB customers. THESL estimated a

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 regression model of hourly load against hourly weather variables (heating and cooling
 2 degree “hours”) and time-of-day and day-of- week variables. The coefficients on the
 3 weather variables were used to normalize the hourly Suite-Metered load (normalized
 4 hourly load = actual hourly load + (normal weather – actual weather) x weather
 5 coefficient). The normal weather for this normalization was estimated over the
 6 period 1999-2008. Average annual HDD and CDD (both measured on an 18 degree
 7 balance point basis) for that period were 3645 and 381 respectively.

8
 9
 10
 11
 12
 13

c) Despite the differences in the normalization methodologies and the definition of
 “normal” weather period, the difference does not materially impact the analysis
 contained in the report. The following table shows the CP and NCP values as filed,
 and computed by normalizing the MURB data to the 1996-2005 “normal” weather.

	As Filed		“Re-normalized”	
	Suite-Metered	Non-Suite-Metered	Suite-Metered	Non-Suite-Metered
1NCP	136.4	1,116.3	136.3	1,116.0
4NCP	484.9	4,169.6	485.7	4,168.6
12NCP	1,279.7	11,117.8	1,278.5	11,119.7
1CP	66.0	980.4	66.2	980.3
4CP	323.3	3,719.6	324.3	3,718.7
12NCP	957.2	9,893.0	957.3	9,892.9

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 50 – SECOND ROUND::**

2 **Reference(s):** **BDR Report, pages 7 and 11-13**

3

4 a) Based on the characteristics of Suite-Metered customers (as described on page 7), please
5 explain why the January load profile for the two sub-classes are reasonably similar
6 (Figure 4.2) in term of both level and shape but the July profiles (Figure 4.4) are not.

7

8 **RESPONSE:**

9 Neither THESL nor BDR collected any appliance saturation data specific to Suite-
10 Metered customers. As a result, any response to this question is purely speculative.

11

12 Subject to that limitation, we believe that these results are reasonable. The sub-classes
13 could reasonably be expected to be similar in terms of electricity uses such as lighting,
14 cooking, dishwashing, use of electronics (television, computers, etc.) and small
15 appliances. In winter, these similar uses would dominate the load shape, assuming that
16 for non-Suite-Metered customers the space heating is predominantly non-electric (gas or
17 oil), and that for Suite-Metered customers, the space heating is predominantly supplied
18 centrally in the building and also non-electric, and therefore not included in the
19 individually metered electricity consumption. In summer, non-Suite-Metered customers
20 would typically have electric space cooling as a major component of the load shape.
21 Suite-Metered customers would, we believe, not have such a high component of their
22 summer load shape determined by space cooling, since either the space cooling would be
23 supplied centrally, or, if an in-suite space cooling unit is in place, the load on such a unit
24 would be mitigated by the effect of space cooling supplied centrally to the common areas.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 51 – SECOND ROUND:**

2 **Reference(s): BDR Report, pages 16-17**

3

4 a) Please indicate the following:

- 5 • In what USOA account is the cost associated with Account Set-Up recorded in
6 and how are these costs allocated to customer classes. Please provide the value of
7 the allocator by customer class, including the Suite-metered sub-class.
- 8 • How are the revenues from the Account Set-Up Charge allocated to customer
9 classes? Please provide the values of the allocator by customer class, including
10 the Suite-Metered sub-class.

11 b) Does THES have a Disconnect charge that is levied when customers are
12 “disconnected”? If yes, what is the charge and please confirm whether the same
13 charge is applicable to all residential customers.

14 c) Further to part (b), please indicate the following:

- 15 • In what USOA account is the cost associated with Disconnection activities
16 recorded in and how are these costs allocated to customer classes. Please provide
17 the value of the allocator by customer class, including the Suite-metered sub-
18 class.
- 19 • How are the revenues from the Disconnect Charge (if there is one) allocated to
20 customer classes? Please provide the values of the allocator by customer class,
21 including the Suite-Metered sub-class.

22

23 **RESPONSE:**

24 a) Account Set-Up costs are part of USoA account 5315 – Customer Billing. These
25 costs are allocated in the cost allocation model by the Customer Weighted Number of
26 Bills allocator (CWNB). Similarly, revenues from Account Set-Up charges are

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 recorded in USoA account 4235 – Miscellaneous Service Revenue, and are allocated
2 using the same allocator (CWNB, which is used to allocate all Revenue Offsets). The
3 allocation to the customer classes is shown in the following table.
4

CWNB Allocator	NSMSC	SMSC	GS<50	GS 50- 999	GS 1000- 4999	Large User	Street lighting	Un-metered Scattered Load
Allocation %	46.0%	11.3%	24.8%	16.0%	0.7%	0.1%	0.0%	1.0%

5 b) THESL has a residential Disconnect Charge/Reconnect Charge for non-payment,
6 applicable to all customers in the residential class. The charges are \$65 (regular
7 working hours) and \$185 (after hours) and are only applicable at the time of
8 reconnection.

9

10 c) Costs and revenues associated with Disconnect/Reconnect are recorded and allocated
11 in the same manner as Account Set-Up costs, described above.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 52 – SECOND ROUND:**

2 **Reference(s): BDR Report, pages 16-17**

3

4 a) With respect to Field Service Trucks, if an outage problem is isolated to a particular
5 multi-residential building (or local area containing such a building) why wouldn't a
6 field service truck be dispatched to check THES's connection/service to the
7 customer(s) concerned?

8 b) Please reconcile the \$179 and \$297 capital costs for meters quoted in the Report with
9 the values used in the Cost Allocation Model – Sheet I7.1. The comparable values
10 here appear to \$95 and \$130

11

12 **RESPONSE:**

13 a) The demarcation point for most multi-residential buildings is at the primary with
14 customer-owned secondary equipment. THESL's Control Center staff know the status
15 of all primary feeders and only if the primary service to such Customers has been
16 interrupted would crews need to be despatched. When a secondary problem is
17 isolated to one building it is usually the customer-owned secondary equipment (low-
18 voltage switchgear).

19

20 b) These two sets of values are not comparable. Cost Allocation Model – Sheet I7.1
21 collects original installed costs of different types of meters, to be used in developing
22 an allocation factor. As well as the values of \$95 and \$130 referenced in the
23 question, the Suite-Metered Sub-Class also has included meters at \$144 and \$440.
24 Each of these four values is multiplied by the respective number of units, and the
25 products are summed to arrive at the weighted average. For each customer class, a
26 weighted average meter cost determined in this manner is used to allocate the cost of

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 meters in the LDC's accounts.

2

3 The \$179 and the \$297 capital costs for meters per customer results from allocating
4 the balance of the meter account, by using the allocation factors computed in Sheet
5 I7.1 as described. The balance of account 1860 includes the cost of legacy meters
6 and wholesale meters, but the meter cost allocator, according to the established
7 methodology, includes only distribution meters in service, at original cost. Therefore,
8 the two sets of figures are not comparable and cannot be reconciled.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 53 – SECOND ROUND:**

2 **Reference(s): BDR Report, page 19**

3

- 4 a) Please provide a schedule that shows fully the derivation of the additional 2009
5 capital costs and 2009 expenses related to the additional planning efforts associated
6 with SMSC.
- 7 b) Please describe in greater detail the adjustments made in Schedule O5 to account for
8 the difference in planning costs.
- 9 c) The discussion on page 19 makes reference to \$39 million in capital being allocated
10 to SMSC. However, the capital allocated to SMSC (per Sheet O1) is \$182 M in Gross
11 Assets and \$91.6 M in Net Plant. Please reconcile.

12

13 **RESPONSE:**

- 14 a) There are no “additional 2009 capital costs or expenses” related to SMSC. These
15 costs are already embedded in their respective USoA accounts. As part of the cost
16 allocation study, BDR attempted to determine which of the assets or business
17 processes would be different to provide service to the SMSC and NSMSC. One of
18 the business processes considered was planning. BDR asked whether the cost to plan
19 for SMSC is the same for NSMSC, and THESL staff considered, based on
20 experience, that the planning cost is higher for the SMSC customers because of the
21 complexity of connecting a large multi-unit residential building, as compared with
22 connecting a single family house. The treatment of planning costs in the cost
23 allocation study was based on the experience of THESL staff.
- 24
- 25 b) The model was first run for test purposes on the basis of a full allocation of secondary
26 costs to the SMSC. This resulted in a total of \$39 million of demand-related costs

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 being allocated to the SMSC for accounts 1805 through 1850. Next, the model was
2 re-run to appropriately reflect the reduced cost responsibility of the SMSC for
3 secondaries. This reduced the Schedule O5 demand-related cost allocation to the
4 SMSC to \$29 million. To test the maximum sensitivity of a reduction in planning
5 costs, the figure of \$39 million was used. This figure was multiplied by 0.9%
6 (.5x.06x.3) as indicated on the report, to compute a maximum estimate of a reduction
7 in planning costs of \$350,000 or 1.2% of the total revenue requirement for the SMSC.
8 Had the figure of \$29 million been used, the amount would have been \$261,000.

9
10 Having determined by this computation that the amount of an adjustment related to
11 planning was relatively small, no adjustment was actually made in modeling to reflect
12 it.

13
14 c) The amount of the Demand-Related components of accounts 1805 through 1850,
15 allocated to the SMSC before any adjustment to allocation of secondary costs, is \$39
16 million. Once the adjustment to reduce the SMSC allocation of secondary costs is
17 made, this amount is reduced to \$29 million. The amount of \$29 million is a
18 component of the total allocated asset balance of \$182 million, which includes both
19 Demand-Related and Customer-Related Costs, and also includes the balances of
20 accounts 1855 and 1860.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 54 – SECOND ROUND:**

2 **Reference(s): BDR Report, pages 19-20**

3

4 a) Please clarify whether it is 30% of the multi-residential buildings or 30% of the Suite-
5 Metered customers in the multi-residential buildings that are served by the secondary
6 infrastructure.

7 b) If the response to part (a) is “buildings”, how many of the Suite-Metered customers
8 are served by secondary infrastructure and has this distinction been properly reflected
9 in the Cost Allocation analysis?

10 c) Please confirm that, once the # of customers served at primary versus secondary
11 voltages has been identified, the Cost Allocation model determines the appropriate
12 allocation of the capital and maintenance costs associated with poles, wires and
13 transformers and no “adjustments” are required to the results.

14

15 **RESPONSE:**

16 a) See page 19, footnote 7 of the BDR Report. Thirty percent of the Suite-Metered
17 customers in the multi-residential buildings are served by the secondary
18 infrastructure.

19

20 b) Please see (a).

21

22 c) Confirmed. The Demand and Customer Allocators are dependent on the load and the
23 number of customers. No further “adjustments” are necessary.

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 55 – SECOND ROUND:**

2 **Reference(s): BDR Report, page 21**

3

4 a) Please describe the types of administrative and marketing activities that are directly
5 incurred for suite metering.

6

7 **RESPONSE:**

8 THESL's administrative and marketing activities include:

- 9 • Using external service providers to develop and produce Sell Sheets, Case
10 Studies, Web Site Updates, Editorial Content, New Customer Information Forms,
11 and brochures/folders to contain handout materials given to new THESL
12 customers
- 13 • Memberships in trade organizations
- 14 • Booths at trade shows
- 15 • On-line access to industry websites
- 16 • Banners, small give-aways at trade functions

INTERROGATORIES OF VULNERABLE ENERGY CONSUMERS COALITION

1 **INTERROGATORY 56 – SECOND ROUND:**

2 **Reference(s):** **BDR Report, page 21**

3

- 4 a) Please confirm that, for purposes of applying the “Minimum System” concept each Suite-
5 Metered customer was treated as a separate connection point. If not, please describe how
6 the minimum system costs were determined.
- 7 b) If part (a) is confirmed, please comment on reasonableness of such an approach in the
8 case where a number of suite-metered customers may occupy the same building.

9

10 **RESPONSE:**

- 11 a) In terms of applying the “Minimum System”, the Board’s categorization
12 methodology was used. Whether Suite-Metered customers were treated as separate
13 connection points or as one connection point for a condominium, the density will be
14 greater than 60 customers per km. In THESL’s case, the result would be the same.
- 15
- 16 b) Please see response to part (a) above. The categorization methodology was based on
17 the OEB’s approved model, which establishes the customer-related component of
18 assets based on the customer density across the entire utility.